

THE ENQUIRER'S HOME BOOK



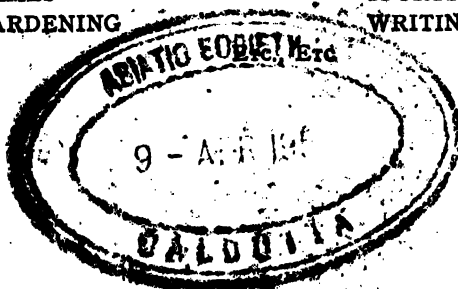
THE ENQUIRER'S HOME BOOK

A COMPLETE GUIDE FOR EVERY BRANCH
OF DOMESTIC LIFE

INCLUDING -

AMATEUR WORK
COOKERY
ELECTRICITY
ETIQUETTE
FURNISHING
GAMES
GARDENING

HOUSE-DECORATING
LEGAL MATTERS
MEDICAL MATTERS
NEEDLEWORK
PAPER-HANGING
SPORTS
WRITING



ILLUSTRATED WITH 17 FULL-PAGE PLATES

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PREFACE

TERENCE, the famous Roman comic playwright, puts into the mouth of one of his characters the wise sentiment, "I deem nothing appertaining to mankind foreign to me." And human interest is the note of this volume, which avowedly deals with most, if not all, that concerns old and young, whatever their ages, station and calling, in the affairs of everyday life. This may seem to be an extravagant claim, but a glance at the table of contents will show that it is abundantly justified.

Home and the family are the outstanding features of the social economy of every English-speaking community and it is for the members of the domestic circle, both in the Mother Country and the Greater Britain beyond the seas, that the ENQUIRER'S HOME BOOK specially caters, whilst the requirements of their kith and kin in the enlightened Republic of the United States are also closely studied.

Scarcely a single branch of human activity and enterprise has been neglected, and the constant aim has been to set forth in simple, pleasing and intelligent language all kinds of information likely to be useful, practical and helpful. The serious side of things has not been developed at the expense of the lighter, but care has been taken to consult all tastes and preferences equally and alike.

Keeping to the text of the home and its immediate environment, it will be found that the ENQUIRER'S HOME BOOK will assist the inmates in a variety of ways. Nearly everyone has a hobby

nowadays. This is the era of the specialist, and the older fashion of promiscuous pursuits—satirised in the proverb, “Jack of all trades and master of none”—has yielded place to the more thorough cultivation of only one or two fields of human energy. To suit such cases, which are to be numbered by the thousand, experts have written on such subjects as “Gardening,” “Photography,” “Poultry Keeping,” and “Amateur Work.”

Sometimes the title of an article conveys no hint of the comprehensive character of the things it discusses. Consider, for example, the subject last mentioned—“Amateur Work.” Exactly what does this embrace? For answer, look at the titles of its nineteen subsections. Here they are—“Tools,” “Soldering and Brazing,” “Bell-hanging,” “Electric Bells,” “Telephones,” “Electric Lighting,” “Wire Working,” “Painting,” “Graining,” “Marbling,” “Distempering,” “Staining and Varnishing,” “Polishing,” “Gilding,” “Paperhanging,” “Glazing,” “Damp Walls and Brickwork,” “Plastering” and “Whitewashing.” Thus within the scope of a single article one is furnished with the sum and substance of many treatises. This, in point of fact, is the guiding principle of the whole book. If we wish to economise time and save money, the best means of achieving this twofold result is to make the ENQUIRER'S HOME BOOK our guide, philosopher and friend.

Domestic economy is and must always be of paramount importance to every girl—and indirectly to every man. Consequently, adequate space has been devoted to it in the following pages. “Cookery,” of course, commands attention, but the long, yet not too long, section assigned to it is reinforced by eminently practical articles on “Carving,” “Trussing,” “Stoves and Heating,” “Jams, Pickles and Sauces,” “Kitchen Work” and “Marketing.” Nor is it supposed, for a moment, that these articles exhaust the subject of household management, as is proved when we turn to those on “The Needlewoman”—which efficiently treats

of every branch from cutting out to fancy needlework, not forgetting such items as darning, patching and repairing, by aid of which "old things are made to look like new" by innumerable painstaking women—"Household Recipes," "Furnishing and Home Making," "Washing," and "The Toilet." Nor are the reasonable demands of the Young Person for the arts and graces of life lost sight of, since the articles on "Dancing," "Etiquette," "Exercise," "How to Dress," "Drawing and Painting," "Music," and "Pets" have been written with a view to the growing tendency of the age to blend the ornamental with the useful, and to study the aesthetical in an instructed spirit.

Trouble, sooner or later, invades every household, the best regulated no less than the worst managed and most neglected. This consideration has necessitated two valuable articles on "The Doctor" and "The Lawyer."

"Take care of the pence," runs the proverb, "and the pounds will take care of themselves." One might almost paraphrase this and say, "Take care of the trifling ailments and you will often avoid graver illnesses." By paying heed to instead of ignoring the little hints that are given us in our ordinary experience, we might readily enjoy—in larger measure than we do—the blessing and comfort of a healthy mind in a healthy body. But it frequently happens that one does not always know what to do in the event of at least some of the more ordinary ailments, to say nothing of diseases of a critical character, and it is in order to render prompt, clear and sound advice, pending the arrival of the medical attendant, that "The Doctor at Home" has been written.

It is often said that the man who is his own lawyer has a fool for a client, and no doubt there is a sense in which this caustic dictum is perfectly true. Only a poor or an exceptionally able man or woman, involved inevitably and perhaps involuntarily in litigation, would conduct a lawsuit *in propria persona*. But

just as "The Doctor at Home" is not intended to supersede the invaluable counsel of the physician but only to enable the house-mother to treat the simpler ailments, so "The Lawyer at Home" will not lead to the closing of the Law Courts or drive the junior bar into the workhouse, but will, it is hoped, prevent unseemly squabbles and quarrels, teach folk to appreciate the supreme importance to be paid to documents, and help them to agree with one another amicably, and thus avert much quite needless expenditure of time, money and temper. With this object both Bench and Bar are sure to sympathise.

Another department of the ENQUIRER'S HOME BOOK the usefulness of which cannot be over-rated, is that which recognizes the necessity for a certain amount of recreation. It may be true that athletics occupy far too much attention, but there is a mean in all things and the benefits of a moderate pursuit of healthy sports and pastimes is universally admitted. Hence arises the justification for the articles on "Holiday-Making," "Games and Amusements," and "Sports and Outdoor Games." To this branch may also be referred the article on the art of "Speaking," a species of intellectual amusement—save in those instances where it may be regarded rather in the light of a purgatorial experience which the study of our pages is intended to remove—in which many men and women are called upon to take part in these days of increased activity in all manner of public work.

To parents and guardians one feature in this book will commend itself, namely, the carefully-considered advice on the vexed question, ever present in countless families, of "Professions and Occupations for Boys and Girls." By such young folk as have already taken the plunge, the friendly maxims in the article on "Self Help" will, it is believed, be found as helpful as they are well intended.

Many subjects in the ENQUIRER'S HOME BOOK that cannot be readily classified will, nevertheless, come to the enormous army of

general readers as a boon and a blessing—such an article, for example, as that giving a succinct summary of the tenets of the various Creeds and Denominations constituting the “Religions of the World.”

Nor are we disposed to be altogether deaf to the appeals of those who ask for information on subjects that may to many seem slight and frivolous. And so the ENQUIRER'S HOME BOOK interprets, among other things, such interesting topics as “The Language of Flowers,” “Dreams,” and “Fortune-telling,” and expounds the meaning of “Christian Names” and a varied assortment of other subjects calculated to assist readers of daily newspapers and weekly and monthly magazines, not to mention the innumerable volumes that pour annually from the warehouses of publishers.

In short, the ENQUIRER'S HOME BOOK is a work which gives, within the compass of a single volume of convenient size, information commonly scattered through many manuals or cunningly concealed within the recesses of ponderous encyclopædias. “*Multum in parvo*” is the Latin phrase that concisely describes its character.

This rapid review of the contents of this volume requires to be supplemented by a few words about the method on which the different subjects have been approached by the large staff of authors who have been engaged in its preparation. Each writer has scrupulously endeavoured to be practical in respect of the nature of the information supplied and intelligible in regard to the style in which it is imparted. Nothing has been taken for granted, and it has always been deemed wise “to err on the safe side” and be simple and direct in exposition rather than learned and possibly involved. Moreover, experience and prudence both have dictated the advisability of anticipating difficulties and explaining them in preference to allowing readers to overcome obstacles for themselves.

It should be added that the main subjects have been arranged in alphabetical order, but consultation of the Index, which comprises more than 2,000 entries, will facilitate reference to the vast array of topics discussed in the pages of the ENQUIRER'S HOME BOOK.

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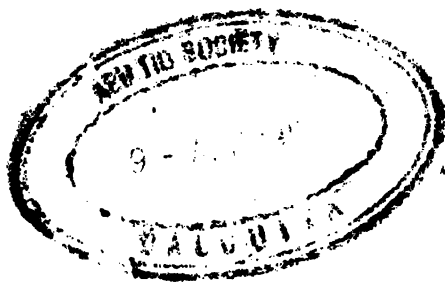
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AMATEUR WORK

TOOLS.

Tools can be classified or arranged in groups and sections thus:—

I. Percussive or Impelling Tools.—

a. Those used for *striking* only, as Hammers and Mallets. *b.* Those used for *striking and cutting*, as Hatchets, Axes, Adzes, etc. *c.* Those used for impulse, whether by *being turned or struck*, as Screwdrivers, Nail-punches, Cold-chisels, etc.

II. Abrasive or Rasping Tools.—*a.* Saws of all kinds. *b.* Rasps and Files for smoothing, shaping, cutting, etc.

III. Paring and Incisive Tools.—

a. Planes of all kinds for smoothing, moulding, etc. *b.* Spokeshaves and Drawing Knives. *c.* Chisels and Gouges.

IV. Perforating or Boring Tools.—

a. Bradawls, Gimlets, and Augers. *b.* Brace and Bits.

V. Holding and Grasping Tools.—

a. Pincers, Pliers, Spanners, and Wrenches. *b.* Nippers for cutting as well as grasping. *c.* Hand-vices, Bench-vices, Clamps, etc.

VI. Guiding, Directing and Defining

Tools.—a. Rules and Chalk-line. *b.* Squares, Bevels, Gauges, Mitre-boxes. *c.* Levels, Straight Edges and Plumb-rules. *d.* Compasses and Callipers. *e.* Pencil, Scriber, Knife, etc.

Thus tools are brought together, and the special purpose of each and

the manner in which it acts are defined and may be recognized.

Among the tools of percussion which must be provided is the hammer, without which a beginner cannot possibly get on. The ordinary joiner's hammer has its head made of steel, and the handle of ash. They are sold in sizes ranging from a couple of ounces to a couple of pounds. An appropriate size for general use is about 1 lb. in weight. It may be desirable to have a lighter hammer of the same kind for driving small nails into light work. This may weigh from $\frac{1}{2}$ lb. to $\frac{3}{4}$ lb. A mistake made by unpractised amateurs is to get a hammer too light for general purposes. A carpenter and joiner uses a heavy hammer for nearly all purposes, for by long practice he can regulate the blow to the work in hand.

The hammer should be grasped with the right hand at a short distance from the end of the handle, in such a way that the end of the handle projects about an inch or more beyond the side of the hand. The hand and the eye act so well together in concert, that after a little practice no difficulty will be found in hitting the nail direct on the head. The face of the hammer should be perfectly flat; when used overmuch it is apt to get rounded, especially if it be of inferior quality, and then it must be got rid of, and its place supplied with a better. If the

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nail be struck, as it should be, by the centre of the hammer head, it will soon be sent straight to its destination; but if it be hit by any part of the face near the edge, the force of the blow will be partly lost, and the nail will be bent sideways, or otherwise moved out of position. A hole with the bradawl or gimlet should be made for the reception of every nail that is hammered in and every screw that is driven into wood. The nail will go in all the straighter for it. Sometimes a knot or any hard substance within the wood will cause the nail to swerve from the right direction and even to curl up, thrusting the point through the wood at no very great distance from the hole at which it has entered. This may often be saved by preparing a way for the nail by the bradawl or gimlet.

The mallet has a beech head, mortised through to receive the handle. Mallets measure from 5 inches to 8 inches across the broad side of the head. Select one of small size, and decline polished mallets and tools with polished handles generally. It is an axiom that wood must be struck with wood and that metal must be struck with metal. One would not think of attempting to drive a nail, or strike a punch, with anything but a hammer. In like manner never think of striking the wooden handle of a chisel or a gouge, or a screwdriver with a hammer, if you are tempted to hit it at all, but always use the mallet.

The mallet is held in the same way as the hammer, but rather higher up the handle, as the head is larger and heavier. In striking with the mallet care should be taken to deliver the blow so that the centre of the face of the mallet hits the end of the handle of the tool.

The hatchet is a tool which the amateur artisan ought to have, especially if he live in the country, or if he has occasion to do much heavy carpentry. It is used instead of a heavy hammer, as a tool for striking, when framing timbers together, and also for driving stakes into the ground. The blade is valuable for pointing stakes, for chopping timbers roughly

to the shape and size required, and for splitting and rending wood, the wedge-shape of the blade adapting it for this purpose. For felling trees the axe is used; but for minor work, a hatchet will suit best. Hatchets are sold in various sizes. The amateur will find a medium size suitable for most purposes to which he may put it.

The axe must be grasped at a distance of about one-third from the end of the handle; but the position of the hand will be regulated in a great measure by the material with which the edge is brought into contact, or the extent or weight of the blow that it is desired to strike. Thus, to deliver a heavy blow, the handle must be grasped close to its end, but to give a light blow the hand must be moved upwards along the handle until it has nearly reached the axe head. When reversed, the flat part of the head may be used in place of a heavy hammer for driving the timbers of any piece of framing into place. In chopping a piece of wood with the hatchet—as, for example, in pointing the end of a stake to be driven into the ground—the stake should be held by the left hand, which should be kept well out of range of the hatchet, the end to be sharpened resting on a trestle. An adept will use the axe for shaping a wedge out of a short piece of wood, but the unskilled is recommended to do this with the paring chisel, lest by an unlucky blow he injure his hand with the sharp edge of the hatchet.

With regard to the tools which impel or drive on being turned or struck; he must have the screwdriver and the nail punch, and he ought to have the cold chisel. The amateur should have one screwdriver with an 8-inch blade for large screws, and a 5-inch one for small screws. Very small screws may be driven by a bradawl, should the smallest screwdriver available prove too large. Never buy fancy screwdrivers, and when buying see that the blade is firmly fixed in the notch cut for the purpose in the ferrule of the handle. The blades of turn-screws range from 3 to 15 inches in length and even longer.

The nail-punch must be held in the left hand. The thick end must be

grasped by the thumb and forefinger, and steadied by the second and third fingers. This enables the operator to hold the tool firmly against the nail that is to be driven below the surface of the wood, and a hollow or notches in the end of the punch prevent it from slipping off. The blows of the hammer should be delivered quickly and smartly.

The cold-chisel is a cast steel rod 6 inches to 9 inches long, usually hexagonal in cross section, and terminating at one end in a blunt edge, slightly wider than the rod. A cold-chisel may be driven against any obstinate nail or screw and will cut it asunder. Cold-chisels are indispensable if holes have to be cut in brick-work or walling of any kind.

We may now pass on to the consideration of the various tools used for abrading or rasping. Of saws the amateur wood-worker should have three kinds, namely, a handsaw, a tenon saw, and a keyhole or padsaw. There are four varieties of handsaws, known respectively as the rip, the half-rip, the hand and the panel. The "rip" saw has a blade 28 inches in length, $2\frac{1}{2}$ or 3 teeth to the inch; and when it is said that there are $2\frac{1}{2}$ teeth to the inch, it is of course meant that there are 5 teeth to 2 inches. The "half-rip" is of the same length, namely, 28 inches; but it has $3\frac{1}{2}$ to $4\frac{1}{2}$ teeth to the inch. The "hand" saw is made in various sizes, namely, 16, 18, 20, 22, 24 and 26 inches, and the number of teeth to the inch may be 5, $5\frac{1}{2}$, 6, $6\frac{1}{2}$, and even 7. The "panel" saw is 24 inches in length, and has $7\frac{1}{2}$, 8, 9, or 10 teeth to the inch.

In selecting a saw, choose one that is thinner at the back than along the edge, in which the teeth are cut. A full size handsaw may be regarded as being most useful for the average amateur wood-worker, and it should have 6 teeth to the inch. Buyers must also look to the pliability or elasticity of the saw, that is to say, the extent to which the blade will bend when the handle is taken in one hand and the point in the other, and both are brought as nearly together as possible. If of good steel the two

ends of the blade may be brought together and the blade will spring out at once to its former condition when the tension is removed.

The tenon saw is altogether different from the handsaw in make, shape, and kind; for it is stiff and rigid and is fitted with a back, which causes the blade to retain stiffness and rigidity. The tenon saw, as its name implies, is used for cutting tenons that are to enter mortises. It is used for cutting a saw-kerf when this is required to be exactly in the lines indicated without departure from the guide lines that are thus marked out. A small tenon saw is also used for cutting dovetails and for mitring, that is, for example, in cutting the corners of the mouldings used in picture-frame making, and on panelled doors and similar purposes. The dovetail saw ranges from 6 inches to 8 inches in length. The tenon saws are made from 10 to 18 inches in length.

Lastly comes the "keyhole" saw, which may be used for cutting curved lines in thin wood. It may be used on thick pieces of wood, but it is very apt to bend or break if the cut to be made is of considerable length, and the saw be moved jerkily, but it is used mostly for the removal of wood that intervenes between two circular holes in near but not actual contiguity, produced by boring through the wood with a brace and bit, as in the case of a keyhole. For very short lengths, as in a keyhole, in which clearance rather than cutting is necessary, the thickness of the wood is a matter of not the slightest importance. The blade of the keyhole or padsaw is always independent of the handle. It is secured and held tightly in the handle by the action of two screws, which exert pressure on a thin strip of iron that intervenes between the screw and the blade. The handles are perforated with a slot as wide as, or a little wider than, the widest part of the blade, and thus the blade may be shortened, and no more of it be projecting beyond the screws than the operator may think necessary, and when out of use the blade may lie partly within the handle, the ends of the blade projecting beyond it.

In taking hold of a saw all the fingers,

except the first, are passed round the handle. The right elbow should be kept well into the right side so as to keep the forearm as straight as possible, and in a direction corresponding to that of the saw cut. The wood should be steadied with the left hand. In sawing down a plank on one or two trestles, as the case may be, the right knee and foot should be placed on the board, partly to keep the board steady and partly to keep the body of the operator steady. In ripping down a plank or in cutting a piece of wood across the grain, the hand-saw—and any saw of this shape, as the rip saw, half rip, and panel saw—should be held at an angle of about 45° to the floor. This will serve as a general guide, for the inclination of the saw must be suited in a great measure to the position of the wood and the nature of the work to be done. For example, in sawing a tenon, the edge of the saw must be kept parallel to the surface of the wood that is being cut, or very nearly so. The head of the operator should be held directly over the saw, so that the eyes may see both sides of the saw. In beginning to make an incision with the saw, the up-and-down motion should be started very gently with very short strokes, and no great force should be applied to the saw until it has entered for about an inch into the board.

As the saw cut lengthens more force may be gradually applied, but whatever force may be used it must be applied in the downward stroke, for it is in this direction only that the saw cuts; in the upward direction it should merely be drawn up. The blade should always be at right angles to the surface of the board through which it is cutting, for if it incline to the right or left to the slightest degree, it is manifest that the friction between the sides of the saw cut and the sides of the saw will be increased, by reason of the cut being out of the proper direction in relation to the plane of the surface of the board. Care should be taken to avoid short jerky strokes, but in the upward stroke the saw should be drawn up to within an inch or two of the point, and in the downward stroke pressed with force against

the wood that is being sawn until within an inch or two of the saw handle. By this means the whole length of the blade, or very nearly so, is brought into use.

The mistakes usually made by the beginner when sawing are: *Firstly*, he is apt to put all four of his fingers through the looped handle of the saw, instead of laying the first finger along the side of the handle that is outwards or furthest from him. *Secondly*, he fails to keep his eyes directly over the saw-blade, so that he may see both sides of the blade, as he may prove to himself by shutting first one eye and then the other, looking downwards on the blade as he does so. It is manifestly impossible to saw straight if the back of the saw and the saw cut already made and the line of guidance for the saw do not form a straight line from one end to the other of the board that is being sawn. *Thirdly*: Instead of allowing the arm free play and motion, it is held stiffly, and far more force applied than that which is necessary to drive the saw through the downward stroke. When these points have been corrected the amateur artisan will have advanced some steps in the way of being a fairly good workman.

A few hints and cautions yet remain to be given with regard to the operation of sawing. It is better in ripping down a plank, or in making any saw-cut of considerable length, to mark the guideline on its surface with the chalk line, by means of which the line connecting any point in one end with any point in the other is struck perfectly straight and true.

A long board will be rendered more rigid in sawing and the progress of the saw facilitated by inserting a wedge into the commencement of the cut. The wedge may be moved down the saw-cut as the sawing proceeds. If the saw "hangs" or, in other words, if the friction between the wood and the sides of the saw be greater than it ought to be, owing to the blade being rusty, or the teeth worn, and in want of sharpening, a little grease or tallow should be rubbed on the teeth and blade of the saw.

For ripping down planks with the

grain of the wood, the rip-saw or half rip-saw is used. This can be done, though not so quickly, with the hand-saw, which will cut as well across the grain as with it. Tenons of large size can be cut with the hand-saw or tenon-saw; but dovetails should be cut with the small tenon-saw. Whatever may be the nature of the work, or whether the cut be with the grain or across the grain, it should be borne in mind that the wood should first be marked with a chalk or pencil line, as a guide-line.

The keyhole-saw, being very narrow in the blade, is used for cutting small holes, such as keyholes, as the name implies. To cut out a keyhole, two holes are generally bored through the wood by the aid of the brace and bit, and the piece that separates them is then taken out with the keyhole-saw. The keyhole-saw is also used for cutting curved lines, as the circumference of a circle in a piece of wood. An opening is made with a gimlet or brace-bit, through which the narrow saw blade can be passed, after which the blade will work its way round in either direction, as may be required.

Wood-rasps supply a most useful means of reducing wood that has been cut somewhat fuller than its proper size, and of smoothing away inequalities of surface. The rasp-blade is roughened on both sides by projecting teeth, which are beaten up in regularly disposed rows from the surface, which in the first instance is smooth throughout. Rasps are made in sizes ranging from 3 to 14 inches in length.

With regard to files for sharpening saws, and warding files which are used for cutting keys, the former are triangular and the latter are flat. Saw files are technically described as Sheffield, Taper, Single-cut and Lancashire, Blunt, Double-cut. The Sheffield files taper from tang to point, while the Lancashire files preserve their width pretty nearly throughout their length. To the novice the difference will appear to be chiefly in the end of the file remote from the tang; in those of Sheffield make this runs to a point, or very nearly so, and those of Lancashire make possess a

blank, triangular end. Saw and warding files range in length from 3 inches to 8 inches. Some amateurs may like to sharpen their own saws, and these should learn to do so, and some, especially those who are, perhaps, at some distance from a town, will take to repairing their own locks and cutting keys from blanks.

In using large rasps or files, whether for wood or iron, the work should be held in the vice or otherwise firmly fixed so that it cannot move, unless it can be conveniently steadied with one hand during the operation. It is desirable, however, to use both hands when possible, the handle of the tool being grasped by one hand, while the other is pressed, but not too heavily, on the end of the blade, or near the end, so as to lend weight to the tool and additional effect to its powers of abrasion. The flat side of the rasp may be used for any kind of work, but the rounded side will be found more handy for rasping down the edge of a round hole, so as to give it a bevelled as well as rounded surface. Small files for cutting metals may be worked backwards and forwards; but in using these, as well as saw-files, a forward cut continually repeated is better.

In our order of arrangement Tools for Paring and Incision come next. Planes which form the first section in the group, and spokeshaves and drawing knives which form the second, are tools for paring and smoothing only; but chisels and gouges are tools that are used both for paring and incising, one kind of chisel being specially known as a paring chisel.

Of planes a jack-plane and a smoothing-plane must certainly be provided. There is a very large variety of planes serving an equally large diversity of purposes; but it is only these two that are absolutely required, for the usual run of work after these, a rebating-plane will perhaps be found to be most useful. The jack-plane is used on rough sawn wood—it is 17 inches in length, and has a cutting iron $2\frac{1}{4}$ inches in width. These planes, and smoothing-planes also, are furnished with a double iron, that is, two irons connected by a short screw with

a large head. The cutting-iron is set with the bevel of the edge downwards : this removes the shavings from the wood which is being planed, and it is this iron which requires sharpening when the edge grows dull. The edge of the break-iron is bent slightly and rests on the cutting-iron, its edge being a little higher up than that of the cutting iron. Thus there is a slight space between the two irons just above where the higher iron touches the lower ; and, the screw that connects the two irons has all the more power in exerting pressure and bringing the two irons together. The bevel of the upper iron being in a direction opposite to that of the cutting-iron, meets the shaving on its entrance through the throat and curls or breaks it upward.

In using the jack-plane the left hand is placed over the fore part of the stock, and the handle or toat is grasped by the right hand, which is used to push the plane in a forward direction. The smoothing plane, like the jack plane, is made of beech ; it is used in much the same way ; but the right hand grasps the stock of the plane, which is very short in comparison with the jack plane. It is used for making the surface of the wood perfectly smooth and even, after the rough outside has been taken off by the jack-plane. The arrangement of the double iron is the same. It may be had with irons ranging in width from 2 inches to 2½ inches by increments of ¼ inch. Planes will be found to work all the more easily if the soles are smeared occasionally with linseed oil. Wooden planes were formerly used almost exclusively, but now they are largely replaced by planes having iron stocks. The rebate plane is used for making a rectangular recess in the edge of a strip of wood, for the reception of a panel or a sheet of glass. They are made from ½ inch to 1½ inch in width. The plane iron is placed across the sole of the plane at a small angle with the sides, and not at right angles to the sides, as in the jack plane. Planes of this description are spoken of as skew-mouth planes.

We will consider, firstly, the mode in which the long planes are used—such as the jack-plane, the trying-plane,

and the jointer-plane ; secondly, the smoothing-plane, and the smaller varieties of this class ; and, thirdly, the planes that are used in grooving and tonguing—as match-planes, rebate-planes, ploughs, and others of a similar kind. The jack-plane must be grasped firmly by the handle with the right hand, the left hand is placed over and on top of the stock, in front of the iron, the thumb being on the side of the plane nearest the operator. Heavy pressure of the left hand in this position is necessary, in order to keep the fore-part of the plane well down, so that the iron may take firm hold of the wood. During the first part of the cut the pressure with the right hand on the back part of the plane should be somewhat relaxed and lessened ; but when the cut is approaching completion the pressure of the right hand should be increased, and that of the left hand lessened. Unless a trying-plane is available the jack-plane will be used for shooting the edges of boards. In this operation the plane is held in a different manner. The handle is grasped by the right hand as before, but the left hand is placed by the side of the plane nearest the operator, the thumb being on the upper surface, the first and second fingers along the side, and the third and fourth on the sole or under part, forming a sort of guide or stop to regulate the passage of the plane along the wood.

The smoothing-plane is used for cleaning off or reducing to smoothness and a perfect level, the surface from which the rough exterior has been already taken by the jack-plane. The distance between the edges of the cutter and the break-iron has been mentioned, but it may be as well to repeat here that it must not exceed ⅜ inch, and may be even less with advantage. The plane has no handle ; the right hand is placed over the stock of the tool, grasping it firmly, just behind the iron and wedge, and the left hand grasps the fore part of the side next the operator, the fingers being turned over the front, and the thumb on the top, the fore part of the plane being completely covered by the hand of the operator. The cutting strokes that are made with the smoothing-plane are short and

quick, and sometimes a slight circular sweep is given to the plane.

These are other points, in addition to the method of holding the plane, that require attention; and these are the direction in which boards and scantlings are to be planed, and the manner in which the plane-iron is to be taken out of the stock and replaced, when necessary, for sharpening or for the regulation of its projection beyond the sole or under surface of the stock.

And, first, with regard to the wood that is to be planed. This must be laid flat on the bench, with one end abutting against the wood stop that is fixed in the bench in such a manner that it can be raised or lowered at pleasure according to the thickness of the wood to be planed. All planing must be done in the direction of the grain of the wood, in order to obtain a perfectly smooth surface. In planing wood rough from the saw, the plane should be worked for the most part in the direction of the saw cut, the rough particles being bent in one direction by the action of the teeth and sides of the saw.

To remove the plane-iron and the wedge by which it is held in place, the amateur artisan, unless he has been instructed in the proper mode of performing this operation, will, in all probability, try to accomplish it by knocking wedge and iron first on one side and then on the other with a hammer. Such a course will spoil the plane. To loosen a plane-iron in order to remove it for sharpening, etc., hold the stock of the plane in the left hand, which should be placed over the upper surface in front of the wedge, and with a hammer or mallet held in the right hand, strike the stock lightly and quickly on its heel or back end. This will loosen the iron sufficiently to admit of its removal with the thumb and finger. In like manner, when it is desired to tighten the wedge that holds the iron, or to make the edge of the cutter project a little more beyond the surface of the sole of the plane, all that is necessary is to strike the stock on the front in a manner precisely similar to that adopted for loosening the iron by striking the heel of the plane. Neither the wedge nor the plane-iron

should, as a rule, be struck on the top, though occasionally a slight tap may be given to the wedge in order to drive it in a little further, or the iron may be tapped as lightly as possible in order to secure its proper adjustment in bringing the edge parallel with the surface of the sole. The sole of the plane, if the stock be without an iron plate or shoe, should be greased or oiled occasionally. This has the effect of preserving the stock and causing it to move more easily over the surface of the wood that is being planed.

It has been said that the planes which the amateur artisan most require are the jack-plane and the smoothing-plane. With these he can do all ordinary work, but for rebating, grooving and tonguing, ploughing grooves, and other operations of a similar character, planes of a different construction, such as the rebate-plane, match-plane, and plough are necessary. The principle and general construction of these planes have already been described. It is with the mode of using them that we are now concerned.

For rebating, or cutting a rebate, along the edge of a board, that is to say, to take away a portion of the upper edge, rectangular in section, so that the lower edge projects beyond the upper part of the board, like one step below another, a rebate-plane is required. Indeed it is necessary to have two of these planes, one having the iron set across the sole at right angles to the length of the plane, for cutting a rebate parallel to, or *with* the grain, and the other with the iron set obliquely across the sole for cutting a rebate at the end of a board *across* the grain. To work such planes as these with anything approaching accuracy, in other words, to make a rebate parallel to the edge of the board, presents a difficulty that is experienced by regular artisans, as well as amateurs, and for this reason, in operations of this kind, a plane called the side fillister is used. This plane has a shifting fence at the bottom, secured by two screws which work in slots in the fence, so that the position of the fence may be regulated in accordance with the width of the rabbet, or rebate, to be made. A

screw-stop is also placed on the side of the plane farthest from the operator, by means of which the distance to which the plane-iron may enter the wood and clear it away is regulated; and in front of the iron cutter projects slightly below it. This cuts down the vertical side of the rabbet, while the plane-iron cuts away the wood horizontally, rendering it impossible with this combination of cutters for any wood to be left in the angle of the rebate.

The rebate-plane and the side-fillister is generally held with the right hand on the top of the frame behind the iron, and the left hand on the front. The side-fillister plane is by no means an expensive tool, as it can be bought at 2s. 6d. or 3s.; but if an amateur has a rebate plane he can easily furnish it with an attachment which will render it to the full as useful as any side-fillister that he might purchase.

Match-planes are bought in pairs, one of the two being so made that the iron cuts a groove or trench lengthwise in the edge of a board; and the other so that the iron cuts away the edge on both sides, after the manner of a double rebate, leaving a projecting rib or tongue, as it is commonly called, in the centre, which fits accurately into the groove that has been cut by the other plane, when the boards are brought together edge to edge. Match-planes are so called because the width of the projection left by one plane *matches*, or tallies exactly with, the width of the groove cut by the other. But, as the amateur can always buy match-boarding ready to his hand, he can do very well without match-planes.

The plough-plane is used for cutting grooves in wood at any distance from the edge that may be required, so that it be not beyond the length of the strips, or arms of wood, that are attached to the fence and by which it is guided along the edge of the wood so that the groove cut by the iron may be parallel to it, and which pass through the stock of the plane as well as at right angles to it. The plough-plane is held by putting the right hand over the top of the plane behind the iron, the first finger along the top by the side of the iron, and the second, third, and fourth fingers round

the arm. The left hand is placed by the fence at the side, the thumb on the top of the arm, the first finger extending along the fence, and the remaining fingers closed. The plough is necessary in such work as making drawers, in which the bottom is let into a groove made all round the inner surface of the sides at a little distance from the lower edge. It is fitted with eight irons varying in width from $\frac{1}{4}$ inch to $\frac{3}{4}$ inch, for making grooves of various sizes. The depth which the iron should project is regulated by a top screw attached to the plane.

The router- or grooving-plane, called the old woman's tooth, will cut a groove across a board and at any distance from the edge, a desideratum in making pigeon holes in which the vertical partitions are slipped into opposite and corresponding grooves formed one in the lower surface of the horizontal board above, and the other in the upper surface of the horizontal board below, of which one forms the top and the other the bottom of the pigeon hole.

The spokeshave has a thick blade bevelled off to a fine edge, which should be kept sharp to be of any real service. The blade has on either end a tang which passes through the stock, a double-handled piece of wood. It takes its name from being used to smooth the spokes of wheels, and it is also used for giving a bevelled edge to any round or oval hole which has been cut with the saw. It may be operated either by moving the tool away from you or by drawing it towards you. When the tool is in use the shavings that are taken off by the blade pass between it and the wood, and come out through the hollow, above the thick part of the blade. When it is necessary to sharpen the spokeshave, the blade must be removed from the handle by blows on the end of the tangs. The ordinary spokeshave is made with cutting edges $1\frac{1}{2}$, 2, $2\frac{1}{2}$, 3, and $3\frac{1}{2}$ inches long.

The draw-knife serves much the same purpose as the spokeshave, but it is used in one direction only, by drawing the edge of the blade towards you, whence its name; it is applied to straight work and not to circular work, as the spokeshave. The chief point of

difference between the two tools is, that the tangs of the blade are not turned at right angles to the surface of the blade, but are at right angles and in the same plane as that in which the blade itself lies; the tangs are fitted with wooden handles. Draw-knives are made in sizes from 8 to 16 inches in length, and the amateur is recommended to buy a spokeshave, with a $3\frac{1}{2}$ -inch blade, and a draw-knife with a 10-inch blade.

Chisels and gouges come next. The amateur wood-worker should furnish himself with firmer-chisels, paring-chisels, and mortise-chisels. The first is the kind that will be most required. They are contracted in width between the blade and the shoulder which projects and butts against the handle which is fitted with a strong ferrule. Firmer-chisels are made with blades from $\frac{1}{2}$ -inch to 2 inches wide. The amateur wood-worker should buy six assorted. There are various shapes of mortise-chisels. They are made in widths varying from $\frac{1}{2}$ inch to $1\frac{1}{2}$ inches.

The firmer-gouge is a cutting tool, used after the manner of the chisel, and differs from it chiefly in having its cutting edge a part of a circle instead of straight. Every part of the cutting edge should be in the same plane. The gouge must of necessity be ground on the outside of the curve, and so the bevel inclines upwards from the lower surface to the edge which is in the upper surface. Gouges are made in sizes from $\frac{1}{2}$ inch to 2 inches.

The modes of using chisels and gouges of the ordinary form are not numerous. It has been said that the chisels used in ordinary carpentry and joinery are of three kinds—the firmer-chisel, the paring-chisel, and the mortising-chisel. Of these the mortising-chisel can only be used for cutting mortises, and the paring-chisel for cutting or paring wood, as the name implies. The firmer-chisel, which is shorter and stiffer than the paring-chisel and broader than the mortising-chisel, can be used equally well for either purpose, and it is the tool that will be of most service to the amateur who cannot afford to provide himself with chisels of each description.

To illustrate the uses of the chisel

it may be convenient to describe the mortise and tenon joint, and to show what these terms mean. A mortise is a notch or cavity cut to receive the end of another piece, called a tenon, which is made to fit it tightly. The tenon is knocked into the mortise, and requires force applied by a striking tool to bring it into its place; and it is prevented from being forced in too far by the shoulders that are formed on either side of the tenon when the side pieces are cut away.

In cutting a mortise, the chisel is grasped firmly by the left hand, and held in a nearly upright position. The wood is in all cases cut by the chisel across the grain. The chisel is of course struck by a mallet held in the right hand. The flat side of the chisel must always be turned towards the end of the mortise, and the bevel towards the middle. Thus, when cutting a mortise, the position of the chisel in the hand must be changed, the bevel being towards or turned from the operator, according to circumstances. All that need be done is to keep driving cuts at a short distance apart, *across* the grain, beginning in the centre of the mortise to be sunk, and proceeding both ways from the centre to either end. It will be found that the chips will come clean out of the cavity without any cutting along the sides of the mortise.

For paring the end of a piece of wood being cut perpendicularly, or very nearly so, across the grain, the chisel should be grasped firmly in the right hand, the piece of wood that is being cut being held down firmly by the left hand, which must of necessity be placed *behind* the chisel and should be kept well back out of the way, to prevent injury from any slipping of the tool. When paring in the direction of the grain, as in cutting a point to a piece of wood, or in fashioning a wooden pin or wedge, for example, the chisel should be held in the right hand, and the wood in the left hand. The gouge may be held in the same manner, according to the nature of the work that is being done.

Among perforating or boring tools, the amateur must have bradawls and gimlets of various sizes. Augers he need not have, because large holes may

be made as well, or nearly as well, with a brace and bits as with augers. The brace and the bits that are used with it constitute together an appliance of considerable value and assistance. Insist on having bradawls which are properly ferruled where the tang enters the handle, and whose construction and attachment to the handle are of such a nature that the awl cannot possibly draw out of the handle.

In the way of gimlets, there are shell-bits, twist-bits and auger gimlets; all these are good, but none is better than the Norwegian "twist nose" gimlets. These are of the "shell" type, but instead of running straight down to the conical screw point in which gimlets of this kind terminate, the blade widens towards the end, and then contracts in width and gives just half a turn before terminating in the screw point, which is slight and very taper. On account of the facility and rapidity with which they enter the wood, and the cleanness with which they do their work, these gimlets are much liked.

Lastly, in this class of tools come the brace or stock and bits. These braces are made in sizes from 8 inches to 10 inches. The bits form a set of twenty-four and these may, of course, be purchased separately. The most common form of bits are the centre-bit, which bores round holes of equal diameter throughout; the rose-bit, used for countersinking; the taper-bit for conical holes; and the shell-bit for long and deep holes of small diameter.

In boring holes with the bradawl and gimlet, the chief care is to see that the blade enters the wood at right angles to its surface, except in cases where it is necessary to pierce a hole at an angle to the surface, as in skew nailing. Practice alone will make the novice perfect in doing this. In holding the bradawl the thick end of the handle is lodged against the palm of the right hand and the ball of the thumb, being retained in that position by the second and third fingers; the first finger is extended along the blade, and the extremity of the thumb rests on the upper end of the handle or on the brass ferule which is fitted over it. To avoid splitting the wood the blade of the awl is always made to cut the grain.

In using the gimlet the cross-piece or crutch handle, into which the blade is inserted, is grasped in the right hand, and held against the palm, the stem projecting between the first and second fingers. It is driven into the wood by a series of half-turns of the hand, the handle being released and grasped again at every half turn.

In using an auger the ends of the crutch handle are held, one in the right hand and the other in the left, and the tool is turned intermittently clockwise, the hands being taken off and replaced on each end of the handle in succession at every half turn of the tool. The hands will be held with the palm facing inwards and the fingers and thumbs grasping the ends of the handle. As in the case of bradawls and gimlets, great care must be taken that the blade of the auger enters the wood perpendicularly to the surface; and with a shell auger it assists the entrance of the tool to cut a small cavity, for the reception of the end of the auger.

In boring a hole with the brace the round flattish knob is generally placed against the chest, and held tightly against it by the left hand, which grasps the handle directly in front of the knob, the fingers resting on the part which is uppermost. The crank is grasped by the right hand, and the crank is turned and the bit caused to revolve. It requires a good deal of practice to use this serviceable tool with ease and readiness; but when the amateur has once overcome the first difficulty of managing it, he will find it to be of the greatest assistance to him in carrying out many operations in carpentry and joinery.

Let us pass on now to tools for holding and grasping. The form and purpose of the pincers are well known. When used as a lever the nail is grasped and held in the jaws by pressure exerted on the parts that are held in the hand, and which therefore may be termed the handles of the tool. The jaws are then turned, either in one way or the other as may be most convenient by bringing the handles in a downward direction. The bow of the undermost jaw of the pincers is brought against the wood in which the nail is embedded, and thus becomes the fulcrum, the tenacity of

the nail representing the weight, and the downward pressure of the hand which is still exerted until the weight is overcome and the nail withdrawn, the power. One handle of the pincers terminates in a round knob, and the other in a claw, which is useful for lifting out any short nail that has a head sufficiently large to be held in the claw. Pincers are made in sizes from 5 to 9 inches in length, and a medium size should be chosen.

Another tool that the amateur mechanic cannot well do without, is the adjustable spanner. It is better than the ordinary spanner, which is a short bar notched at each end for the reception of the nut. Thus a double-end spanner will only deal properly with two sizes of nuts that will enter and fill the notches. The adjustable screw wrench will deal with nuts of any size within the full measure from jaw to jaw, when fully extended; and there is the advantage of having a single tool capable of dealing with nuts of any size within its capacity, instead of many separate tools, which will only deal each with two nuts, and only of certain sizes. There are many patterns of adjustable spanners, and their size varies from what may be carried in the waistcoat pocket to a yard in length.

Amongst guiding, directing and defining tools there is a great variety of rules made. One of the most useful is a two-feet two-fold arch-joint box-wood rule, one costing a shilling.

The joiner's square consists of a steel blade, set at right angles to the stock, which is faced with brass to preserve the wood from injury by blows or other causes, the wood that is used being of rosewood or ebony. Squares are made with blades from 3 inches long. A 9-inch square in rosewood will be found sufficient for most purposes. The stock is made, say $\frac{1}{4}$ inch thick, that its face may be applied to the edge of the wood, and the blade laid on the surface which requires marking, and which is adjacent to and at right angles to the side to which the stock is applied. If you doubt the accuracy of your square, apply it to the true edge of a piece of planed board, and draw a pencil line against the outer edge of the blade. Then turn over the square,

placing the stock against the same edge in the opposite direction, and the outer edge of the blade against the pencil line. If the edge of the blade and the pencil line coincide the square is true; if they do not, the square is not true, and consequently should be rectified.

The marking-gauge is made of beech-wood, and consists of a solid head, which slides stiffly along a wooden bar, inserted in a hole cut in the head. Through this bar a steel marking point passes. When it is desired to mark a line at any short distance from the edge of a piece of wood, this edge should first be planed true. By aid of the rule the distance between the marking point, and the face of the head of the gauge is measured; and when the head has been moved on the bar to the distance required, it is fixed by a thumb-screw. The face of the head nearest the marking point is then placed against the edge of the wood adjacent to the surface on which the marking is to be made, and the head is then firmly grasped and pressed against the wood, and the marking gauge moved backwards and forwards until the required mark is sufficiently defined.

In using the marking-gauge for single lines, and the mortising-gauge for double lines, straight in both cases and parallel to the edge of the wood on the upper surface of which the marks are made,—the object is to preserve the distance to which the points are set from the head of the gauge, and marking, perhaps, many pieces of wood in the same manner, as, for example, in cutting mortises and tenons. Gauges can be regulated to mark single or double parallel lines, as the case may be, according to the nature of the gauge, whether marking-gauge or mortising-gauge, at any distance from the edge of the wood less than the length of the handle. When the points have been accurately adjusted to the desired distance apart and from the head, if a mortising-gauge be used, the bar or stock of the tool should be grasped with the right hand, in such a manner that the thumb is pressed against that part of the head nearest the operator, and the forefinger laid over its top and the opposite side. The points should be just long enough to make a slight

groove or scratch along the surface of the wood; if they are too long they drag in the wood, and prevent the operator from doing the work quickly and easily.

A spirit level is useful, and in some kinds of work necessary, and a pair of compasses are desirable for striking circular arcs.

It is well to have a pair of 4-inch plain compasses, and for some purposes larger ones also. They will be found very useful, especially in taking distances on the wood, and then applying the points of the compasses to the rule to ascertain the measurement.

The only class of tools that yet remain without comment are, the scribe, the pencil and the knife. The small compasses to which reference has just been made will always serve as a scribe to mark the end of a flat board which is to be dropped on an irregular surface of any kind so as to fit it exactly.

Pencils are indispensable, and these may be bought by the dozen. It matters not whether they are oval, which is the usual shape, or round, and as long as they can be brought to a decent point with knife or chisel, and are of lead which will make a sufficiently well-defined mark.

Bright steel tools are dearer than black ones and any cracks or defects are more easily seen in bright tools. The advantage of black tools over bright tools is that the black tools do not rust on exposure to damp or rain, whereas bright tools unless greased or kept dry will rust on the slightest provocation.

METAL WORKING

All kinds of work in sheet metal, such as zinc-working, plumbing and gas-fitting, require a knowledge of the processes of soldering and brazing. The edges of pieces of sheet metal are joined together by soldering and brazing, and it is as well to know how to make a joint in metal, whether sheet or pipe, and to possess the few appliances necessary for doing so. If an amateur can do no more work of this kind than repair tin pots, etc., it will be of advantage to him, for the itinerant tinman is seldom at hand when his services are most required.

SOLDERING AND BRAZING

may briefly be described as methods of uniting pieces of either the same or different kinds of metal with a strong and, if necessary, water-tight joint.

To effect this by *soldering*, an alloy called solder is used. This only is melted, the metals to be united not requiring to be heated specially, but coming into contact with the melted solder they naturally get slightly warm.

In the operation of *brazing* the metals to be joined must be raised to the melting point of the brazing composition, which is soft brass. Although this makes the stronger joint, the necessity for exposing the articles to such a great heat renders this operation inapplicable to many purposes.

Soldering is very useful for joining copper and copper, copper and brass, copper and iron, brass and brass, brass and iron, tin and tin, and tin and any other metal. If the joint has to stand a rather high degree of heat—such, for instance, as the seams of a steam boiler—a *hard* solder must be used. By this is meant a solder that only fuses at a high temperature, whilst a *soft* solder fuses at a low degree of heat.

The following are the compositions in parts by weight of some of the most useful of solders, with the degrees of heat required to melt each:—

	Lead.	Tin.	Bismuth.	Deg. F.
Coarse	2	1	—	440
Fine	1	1	—	323
Fusible	1	3	5	212
"	1	1	4	200

The surfaces to be united must be thoroughly cleaned and brightened—without this the solder will not adhere. The soldering bit must be heated sufficiently to melt the solder, but it must not be made red-hot, because this heat would destroy the solder.

Whilst the bit is warming, *tin* the surfaces by dipping them into melted solder, first coating the bright parts with soldering flux made of muriatic acid, or spirit of salt as it is sometimes called. The acid must be *killed*, or rendered neutral, before it is used, and this is done by putting into it small pieces of zinc and making a saturated solution of chloride of zinc. Sometimes resin is used instead of the acid; but the neutralised acid is

preferable, because it does not leave the work in such a mess as resin. This process will leave a thin coat of solder. When it cannot be done thus, the surfaces must be tinned by means of the soldering-bit. In this case they must be coated or washed with the flux as before, but the solder must be melted on the places required with the hot bit.

When tinned, the surfaces should be brought close together, a little flux rubbed along the joints, and the bit dipped in the acid and put against some solder, so that the melted solder will flow to it. The bit must now be applied to the joints, and drawn slowly along in such a manner that the solder between the joints is melted, and the joints filled up. A little practice will soon make the amateur tolerably skilful in doing this.

The soldering-bit or *copper-bit*, as it is sometimes called, is a piece of copper held between the prongs of an iron rod which is driven into a wooden handle.

The copper, immediately it comes from the fire, and before it is used, should be rubbed against a piece of brick, or something of the sort. This is done to remove any dirt or oxide that may happen to have got about it, which, if allowed to remain, would prevent the solder, from sticking to the copper—thus, in all probability, spoiling the operation. Besides the soldering bit, little else is wanted for soldering—an old knife for scraping clean the metal that is to be soldered, and a bottle containing a little flux or killed muriatic acid made as described.

Should it be desirable for the solder not to adhere to any portion of the article, a paste must be made with whiting and water, and put about those places; this paste will harden with the heat, but can easily be removed after the soldering operation is effected.

Very thin sheets of metal can be soldered best by moistening the surfaces with the flux, and putting a piece of tinfoil between them, after which the two pieces to be joined are placed between a pair of hot tongs until the tinfoil is melted. This is a very simple, expeditious, and neat method of soldering thin sheets of metal.

In brazing, the pieces to be united

are scraped perfectly clean, in the same manner as for soldering and the edges painted with borax ground in water to the consistency of paste. The pieces are bound firmly together with fine soft iron wire, or held together with a pair of tongs, and put into a clear fire. When just red-hot they must be taken out of the fire, and a few bits of spelter solder and a little powdered borax put on the joint, which is then returned to the fire and kept there until the spelter is thoroughly melted.

If the operation is performed with care, the spelter will penetrate quite through the seam, and, indeed, almost through the pores of the metal itself. The spelter used for brazing should be tolerably soft and in small pieces. Braziers generally use granulated spelter which is made by pouring it whilst liquid into water. When granulated brass is not at hand, brass filings will answer almost as well.

For brazing very small articles the amateur will find a blow-pipe and a piece of charcoal of great assistance to him. The charcoal is held an inch or two from a flame, which by means of the blow-pipe is caused to impinge upon the article laid on the charcoal. A great heat is thus obtainable, the article is manipulated with greater facility, and the process can be watched much better than when a common fire is used.

The methods of soldering and brazing having been described, various operations in working sheet metals, plumbing, and gas-fitting will be more readily understood. We may confine ourselves in zinc-working to making such zinc joints as may be wanted in covering a roof, putting in the flashing of such a roof, and making a zinc gutter and pipe; in plumbing to stopping a leak in a pipe and joining two pieces of pipe together; and in gas-fitting to one or two simple operations that the amateur can manage without assistance.

A plumber's joint is used when two pieces of lead or compo pipe of equal diameter are to be joined together. The edges must be scraped clean, and a little tallow rubbed over them. The joint is then held in such a position that melted solder may be poured all round

it. The melted solder that adheres round the joint, is pressed on all sides with the plumber's wiping cloth, so as to smooth it down and render the surface perfectly even. The joint is thus made to swell round the junction of the pieces of pipe on all sides in an egg-shaped form. When there is no side-strain on the joint, as in a pipe running down the angle of a wall, the bell-mouth of the lower portion is sometimes made a little larger. The coned upper piece of pipe is then dropped into its place, the solder run into the space, and the joint finished by passing the heated iron round the ring of solder.

In gas-fitting, if the pipes be of iron, they are put together by screwing the ends into a socket. With connections of this kind, specially made for the purpose, pipes may be joined together at right angles, or three pipes may be brought together by means of a T joint, by which two of the pipes are joined in the same straight line; the third proceeding from the point of junction at right angles to the other two. The male screw of every pipe that enters a socket should be smeared with white lead before it is put in. Even gas-burners should be treated in this way. The white lead renders the joint impervious to water, air, and gas.

Small pipes of compo metal used in gas-fitting, are joined in the following manner. A small copper bit is used for gas-piping, and a softer kind of solder, as the compo metal melts at a comparatively low temperature. These compo pipes may be soldered to taps and connections of all kinds in the same manner. The joint made in gas-pipes need not be so large as the ordinary plumber's joint on a water-pipe; indeed, but little solder is required in making a joint in gas-piping.

A joint cannot be made unless the piping is perfectly dry. Therefore before attempting any repairs to lead water-pipes, the water supply should be turned off at a tap usually placed within the house where the service pipe enters; for gas-pipes the gas should be turned off at the meter. The pipes must be allowed to dry. This can be assisted by a little heat near the spot it is desired to solder. When a pipe is

cracked by frost or otherwise injured, it is useless to attempt to stop the slit or hole until the pipe is dry. Then the crack or hole may be filled with solder; or, what is far better, the pipe may be cut, the defective part removed, a piece of sound pipe substituted for it, and the ends joined together again.

There are many defective domestic utensils that may easily be repaired by soldering. Suppose that the damaged article is a coffee-pot, and that the damage done to it consists in the spout having become unsoldered by getting in a flame when placed on the fire. The edges of the separated parts must be scraped clean, and dressed with soldering flux (chloride of zinc). The parts to be united are then held close together, and some solder run round the joint by applying the end of a stick of solder to the hot point of the copper bit, whose heat will melt the solder and cause it to flow nicely round the joint. Suppose that the article to be mended is a leaky pan. If the leak cannot be easily detected with the eye some water must be placed in the pan and the places at which the water issues must be carefully marked. In any case, the black crust on the pan must be carefully scraped off, so as to render the pan as bright and clean as may be in this particular part. If there be but one or two small holes, the pan may be made useful again by spreading a drop of molten solder over and round the hole or holes. This will be sufficient to mend small pin holes; if, however, the holes be too large to be stopped with a drop of solder, and they occur in three or four places tolerably near to one another, the best thing to be done is to lay a new piece of tin of sufficient size to cover all the holes, and to extend a little beyond them. The piece may be cut of the shape required from any old tin. The cutting is easily effected by a pair of shears or strong scissors. After marking the place where the patch is to be put on, scrape the metal perfectly clean to the extent of $\frac{1}{4}$ or $\frac{1}{2}$ of an inch on each side of the mark. Now clean the soldering bit, which has been heated in the fire, dip it for an instant in the soldering flux and bring the solder in contact with it, the

solder will melt and cover the end of the copper bit, making it as bright in appearance as tin plate. Replace the bit in the fire, or where it may be kept hot for use when wanted, and then lay the new piece of tin on the pan in the position in which it is to be fixed, and which has been sufficiently indicated by the cleaned patch. The pan may be touched with flux along the line where the joint is to be made, and the new piece as well. A little solder may now be melted along the joint by means of the bit, and the solder should be drawn along the edges until the joint is complete and perfect in every part. When the solder has cooled, which it will do very quickly, the vessel may be filled with water to see if the work has been effectually done.

BELL-HANGING

may next be considered. In bell-hanging soldering is not required, but in wire-working soldering will sometimes be found useful in uniting the ends of a piece of wire so as to form a ring. A neater joint is made in this way by filing down the wire and fitting the surfaces together for the length of an inch or two, than by twisting them together or by the usual plan of forming a loop at each end of the wire, thus hooking the ends together.

In old style bell-hanging the tools required beyond those the amateur may already have in the shape of hammers and chisels for lifting floor-boards and removing skirting-boards, and a screwdriver for re-fixing these in their places by means of screws, are pliers for bending, twisting, and cutting the wire, and a gimlet or two, from 2ft. to 3ft. long, for boring a passage for the wire from one floor to another. This is only required in old houses, or in new houses in putting up bell furniture in rooms where no provision has been made for bell-hanging. It is usual in building a house in the present day to provide for the passage of the bell wires from floor to floor by inserting bell-tubing in the walls. This tubing is buried in the plaster, and the wire can be passed down it at pleasure without doing any injury to the walls. Even in an old

house, when undergoing thorough repair, it is advisable to insert bell-tubing by cutting a channel for it in the plaster, if the walls be plastered, and filling up the depression and hiding the bell-tubing with some fresh plaster.

The old fashioned style of bell-hanging, perhaps, is the most expensive work done in the house when viewed in relation to the materials and fittings used. Much trouble, care, and consideration is involved so that the bell may work easily. To this end the position of the bell, the handle by which it is set in motion, and the course taken by the wire should be duly considered, the course of the wire being arranged so as to avoid angles wherever it is possible to do so; because wherever the direction of the wire is changed a crank is necessary, and every additional crank increases the difficulties. Now the practice of fitting electric bells has become so general that old style bells are seldom found in newly built houses.

ELECTRIC BELLS

Electric bells work quite differently from those actuated by cranks and levers, the wire carrying the electric current is not subject to any movement and may be fastened firmly to a wall and twisted in any direction. It is unnecessary here to discuss the principles that govern the action of the electric current. For our practical purpose it is sufficient to know that the electro motive force, always called E.M.F., is generated by chemical action in a primary battery cell. For the ringing of bells these battery cells are usually wholly self-contained. Dry cells are now very often used: these are on sale at most ironmongers and at all dealers in electrical sundries. The wet cell in common use for bell ringing, called the Leclanche, has for its negative element a carbon rod in a porous pot, and for its positive element a zinc rod in a square glass outer jar, which may be of one, two or three pint capacity. The porous pot is filled around the carbon rod with crushed coke and peroxide of manganese, and the top is sealed with melted pitch or similar material, a small hole being made through the sealing wax so as to allow of the escape of gas generated

in working. The zinc rod always requires to be amalgamated before use. Amalgamation consists in coating the entire surface of the zinc with mercury. Both the positive and the negative poles have attached to them a brass terminal fitted with a screw to facilitate their connexion with the bell wire.

When the cell is wanted for use the porous pot is placed in the middle and the zinc rod is placed in one corner of the glass jar, which is then three-quarters filled with a saturated solution of sal ammoniac (ammonium chlorid). The cell will be in working order as soon as the solution has permeated through the porous pot, and this may be hastened by pouring some of the solution through the small gas hole in the top of the porous pot.

The various dry cells now obtainable at small cost are modifications of the wet cell just described, but they possess many advantages over it; amongst these are cheapness and entire absence of mess. When more than one cell is used the combined cells constitute a battery, and roughly speaking the greater the length of wire through which the current has to travel and the greater the frequency of the ringing the more cells will be required. In forming a battery the poles of the cells are coupled by copper wires, either in parallel, so that all the positive elements are connected together and all the negatives together thus combining the elements of the small cells into the equivalent of one large cell. This gives a current of high amperage and low voltage; it is in effect volume of current. Otherwise when the poles of the several cells are connected in series, that is the zinc and the carbon of adjoining cells, a current of high voltage and low amperage is produced, and this is the way to overcome the resistance of a long circuit of wire.

The battery or battery cell is only active during the time that the circuit is closed, that is whilst the bell is ringing, and therefore the lasting quality or life will depend on the frequency of its use. In some houses the electric bell may be rung on an average only twenty to thirty times in a week, whilst in others there may be as many rings in half an hour. This must be

taken into consideration when deciding on the number of cells; one or two quart size cells suffice for a small number of pushes used but seldom, and a dozen or more cells may be necessary in a large installation frequently used. During the time a Leclanche cell is in actual use hydrogen is evolved, and this unites with the oxygen given off by the manganese; the hydrogen is generated much faster than the oxygen, and the excess is absorbed by the carbon and this has the effect of polarising the cell and thus the current becomes less and less till it is insufficient to overcome the resistance and so ceases to ring the bell. Whilst the cell is not in use this polarized condition will right itself and current will be available for another ringing of the bell. Thus the current from a Leclanche is not constant, it is soon exhausted, but recovers itself when used intermittently. From what has been said it will be clear that larger batteries, that is more cells coupled in parallel, must be used when current is wanted frequently than would be the case when current is wanted seldom.

Apart from the action just described ammonia vapour is generated when a cell is in actual use and the vapour corrodes the connections of the cells and also any other metal which is within its reach. The corrosion which results is often spoken of as though it had been caused by the solution creeping, and when the action is severe the connexions are often badly damaged and even spoilt. Cells should be kept in a cool dry place out of the way and out of sight, but where they may be looked at from time to time. In ordinary cases cleaning and renewal of evaporated fluid may be done about once a year, but when the batteries are called into action very frequently then intervals of a month or so may be long enough.

The current produced in the battery is conducted in a continuous circuit from pole to pole by copper wire, and in its course it rings the bells in the given circuit. The line wire used for electric bells is made of copper, which metal possesses a high electrical conductivity, twin wires, which are

perfectly insulated by being coated with cotton saturated in melted paraffin wax, are always used, the two wires being bound together by another layer of insulated cotton. This line wire may be bought ready for use at most ironmongers and of all dealers in electrical apparatus. A better insulation is provided by covering either one or both wires with rubber or some one of the many compounds used for the purpose. For good class work and in places likely to be damp this kind of insulation should be preferred. The double cotton covered wire may do for cheap work and for temporary fittings. The sizes of line wire generally used for electric bell work are Nos. 18, 20 and 22, and the middle gauge may safely be chosen. For some purposes a flexible wire is required: this is made by using a bundle of from six to twelve fine copper wires which together provide a conductor equal in area to the single wire. These cords are as flexible as a piece of string; they are made with wire of Nos. 36, 38 and 40 gauge, six, nine, and twelve strands being used. These are described as 6/36, 9/38, and 12/40, the first figure denoting the number of strands and the second the gauge of wire.

The various kinds of wire may be bought either by weight or by length, and when wire is wanted only sufficient for a particular purpose the distance that it has to run should be measured and the required length obtained. The paraffined cotton covered line wires, which are suitable for use in dry places only, is stocked covered in a variety of colours, double covered, triple covered, and also braided with cotton. The indiarubber covered line wires recommended for general house wiring have the copper wire tinned, then covered with pure indiarubber and then double covered with cotton and paraffined. Vulcanized indiarubber covered line wires for outdoor and special uses have the indiarubber coated tape wound round them: this is afterwards vulcanized and covered with braided cotton and then coated with a preservative solution. The twin line wires may have in addition to the usual

double cotton cover and paraffining either one or both wires covered with indiarubber. The various kinds of wire are wholesaled by the mile length and retailed in coils of 110 yards (16 to the mile); the price ranges from about 1s. 6d. per 110 yards upwards.

The pushes, bells, indicators, etc., that are required in fitting up an installation of electric bells, are to be bought in an endless variety of style, quality, and price, and at a cost that is considerably less than would be that of making them in small quantities. We may therefore assume that the amateur would procure, when the installation is to be commenced, all the necessary fittings, together with a sufficient quantity of wire. On this assumption the first step will be to go carefully through the whole bell wiring system that it is proposed to carry out and to make a note of every item required. Most dealers in electric bell fittings publish illustrated price lists, and some of these lists should be at hand for reference when making choice. The position of the indicator is perhaps the best thing to decide first; this should be where it is most conveniently seen by the person who will have to answer the calls, and the bell should be so placed that it may be heard at all points necessary, and the battery should be near it. These positions will of course depend on the size and the design of the house and must be left to be determined by the people on the spot. Suppose the notes of the items are begun at the front door. Here we shall note that an outside door push is wanted; the position of the push must be determined and one suited to the purpose may be chosen from a catalogue. Making a mental note of which way the wire will be got through to the inside of the door we may proceed to trace the course that the line wire will take to reach the indicator and can then measure the distance and make a note of the quantity of wire that will be required. The course of the wire will differ with every variety of house, and beyond recommending the amateur to keep as much as possible to long straight runs of wire, concealed by cornices, skirting boards, or dado rails, the planning

must depend on the peculiarities of every different house.

Next begin at some other point where a bell push is desired, say in the dining-room near the fireplace. Here the brickwork of the chimney breast will require to be plugged to afford screw holds for fixing the bell push. The desired style and make of push can be selected from a catalogue. From this push the wire will be taken to the indicator by the most convenient course. In new houses and in high class work a zinc tube extending from the bell push to the skirting board would be embedded in the plaster of the wall and the line wire would go through this tube and so be quite hidden from view. When fitting electric bell wires in old houses where their sightliness is not of great importance, it is quite allowable to fix the wire on the surface of the wall.

This may be often done in a way that leaves the line wire invisible to casual inspection. The bell push is placed close against some sheltering angle, and the wire that leads from it is selected of a colour to match the decoration against which it is to be nailed.

When more than one bell push is to be used in the same room all the wires from the several pushes are brought together at some convenient place and connected so that they are continued as one twin wire to the indicator. The indicator would show from which room the bell had been rung and of course there would be no advantage in indicating which one of the several pushes in the same room had been used. The quantity of wire that will be required is measured and noted, care being taken also to note any essential particulars as to colour, etc. In the way just described every point at which a bell push is desired is separately examined, the kind of bell push to be used is determined, the course of the line wire from push to indicator is thought out, and the length of wire required for the run is measured and noted. When all the pushes have been located, the number of places from which bells may be rung will be known and an indicator having the requisite number

of holes may be added to the list of fittings to be obtained.

There are three ordinary varieties of indicator, all of which are operated by an electro magnet which releases the signal vane; one has to be replaced mechanically (by hand) after use, another is replaced by the electric current, and yet another consists of a simple pendulum which is set in motion when the circuit is completed and which swings for a minute or two, the arcs gradually becoming less and less till the pendulum comes to rest. The first named kind is most generally used; in this the indicator is set with all holes blank by pressing a sliding rod, then when the circuit from a bell push is completed the vane is released and shows at the particular hole to which it belongs. In this way any one or all the signals may be operated at will, but when a vane has once dropped it must be replaced by pressing the sliding rod before it can be used again. This means in effect that the person who attends to the call bell must in every case press the indicator slide. The second kind is replaced by sending a second current through the wire, but it is not so satisfactory in its results. The third kind, which employs a pendulum at each opening, is very simple and needs no replacement, but it is likely to cause confusion if instant attention is not given to the call before the particular pendulum may have almost ceased to vibrate, and be difficult to identify; and again if the signals are at very short intervals it may be difficult to know at a glance which one requires attention. For general purposes the mechanical replacement indicator may be recommended.

The electric bell is used simply to call attention to the indicator and only one bell is required irrespective of the number of bell pushes. Electric bells are obtainable ready for fixing at a cost not exceeding that of the necessary component materials if these are bought singly. A bell of fairly good quality will last for many years if fixed where damp will not affect it. The ringing of the bell may be tested at the shop where it is bought, and there are many varieties of pattern

and tone from which to make a choice. As a matter of general convenience the bell is usually fixed at a point near the indicator, but this is not at all necessary, and if occasion requires the two may be placed any distance apart. The battery is also usually placed near to the bell and indicator, but this is not essential.

Having procured all the fittings and materials that are shown by our notes to be required for the particular installation, we may proceed to the work of fixing the bell pushes, wires, indicator, bell, etc. Every push, indicator, bell, and battery, has a conveniently arranged clamping screw by which connexion can be made to the circuit wire. These clamping screws are provided with milled heads actuated by thumb and finger in all places where the connexions have to be made and broken frequently or even occasionally. In cases where the connexions are permanent the screws have a slotted head to be turned with a screwdriver. If the line wires are sufficiently long to reach from point to point and are handled carefully so as not to break them it will be possible to complete the entire wiring without having to solder a joint. This is commonly the practice in small installations.

When the wires from more than one bell push have to be connected and so form one line wire to the indicator, the connexions must be properly soldered or they will soon become defective. The copper wire must be laid bare by scraping off the insulating covering and the bright wires twisted together carefully for a length of at least half an inch and soldered by means of a copper bit. The flux to be used must be a non-corrosive one; resin will suit very well, or one of the many tinning preparations specially compounded for the purpose may be used. The soldered joint of bare wire should be carefully and thoroughly recovered with insulating material, rubber tape being that generally used. Instructions on soldering are given on another page in this section.

Commencing with the front door push we may first decide its exact position on the door frame and then

with a gimlet bore a hole through the wood to allow the line wire to pass. Some note should be taken as to where is the most desirable point inside the door frame for the exit of the gimlet. Often a straight through hole is not the most desirable one to make. In any case the hole should be just large enough to allow the twin line wire to pass; big holes are unsightly. The wood around the bell push will need some trimming to allow the push to bed down properly. The trimming may be done with a gouge or chisel, or even a pocket-knife serves the purpose in many cases. Some pushes are meant to drop into a large round hole that is readily bored with a brace-bit. The bell push is fixed in its place usually with a couple or three ordinary wood screws. Before the final fixing but after the fitting has been completed the line wire must be connected to the push. Supposing the line wire to be in a coil the outer end is straightened for a length of a foot or two and passed from inside through the hole in the door frame. A convenient length is drawn outside and the twin wires are separated for an inch or so, taking care not to injure the insulation. Then the end of each wire is scraped bare and bright for a length of half an inch or so. One brightened end is fixed under one of the clamping screws of the bell push, the other brightened end under the other clamping screw. The clamping must be done thoroughly well, first taking a half turn of wire under the screw head, and the two bared wires must on no account be in contact with each other or with the same piece of metal on the bell push. Perfectly solid contact should be made at the two clamping screws and beyond that the wires should be kept well apart to avoid short circuiting. Before fixing anything the efficiency of the work may be tested by baring the other ends of the line wire in the inner part of the coil and connecting these with the electric bell-terminals, the battery being interposed, of course. Then on pressing the push if all is in proper order the bell will ring. The bell push may then be finally fixed.

The line wire is carefully uncoiled

at its outer end for a convenient length and placed in the position leading to the point where the indicator will be fixed. At suitable intervals which may range from a foot to a yard, the line wire is fixed to its support—the skirting, cornice, or whatever it may be—by wire staples specially made for the purpose; a sufficient quantity of these staples should be procured when buying the other fittings. It is easy to spoil the whole work in driving in these staples. The insulating covering of the line wire must not be damaged nor must the staples be driven in so far as to break the covering and so cause short circuiting by connecting the twin wires. The only essential point to be observed in laying the line wire is to avoid damage to the insulation. The wire may be run in any direction and bent at any angle without affecting its efficiency unless the bends are made so carelessly as to break the wire or destroy the insulators.

When the line wire reaches the indicator one of the twin wires is connected to the appropriate screw of the indicator, the other wire is connected to one terminal screw of the bell. The other terminal screw of the bell is connected by a single wire to one pole of the battery and the other pole of the battery is connected to the indicator. This completes the whole circuit so far as the one front door bell push is concerned. Here it may be convenient to trace the course of the electric current and its action through this one bell system. First let it be understood that the electric current is supposed to flow along the line wire in one direction continuously so long as the wire is unbroken, and when the continuity of the wire is broken the current ceases. In the present case the break in the circuit occurs in the bell push at the front door. On pressing the push the current proceeds, say from the button to the contact piece below it, thence through the clamp screw, along one twin line wire to one terminal screw of the indicator, through the coil in the indicator to the other terminal screw, along the single wire to one terminal of the battery, through the battery to the other

terminal, along the single wire to one terminal of the electric bell, through the coil of the bell to the other terminal, and thence along the other twin line wire back to the push on the front door, thus completing the circuit. On removing the pressure from the bell push the spring separates it from the contact piece below and the circuit being thus broken the electric current ceases to flow. Although the electric current is actually generated in the battery, this is immaterial for purposes of explanation. The wire is always charged with the current and ready to carry it onward as soon as the circuit is completed.

This explains the completion of one electric bell circuit and any number that may be added will only be repetitions of the same, it being understood that one bell and one battery will serve for all the circuits. The bell push, the line wire, and the connexion of this with the bell and indicator are necessary in each case, but the same connexion between the bell, the battery, and the indicator, will serve for all.

TELEPHONES

for domestic use and for communicating between house and stable, office and factory, etc., are easy to fit up and a great convenience in use. When once a domestic telephone system has been installed and got into satisfactory working order it is soon classed amongst those things that are indispensable. In this book we are not concerned with the apparatus used by the great telephone companies, by means of which the subscribers are linked together on speaking terms even when hundreds of miles intervene; these telephones are much more complicated than the domestic appliance which is dealt with here. There are many varieties of domestic telephone apparatus obtainable of all dealers in electrical sundries at prices ranging from a few shillings upwards. Each apparatus consists essentially of a transmitter and a receiver: the two are often combined in one appliance. A pair of these appliances one at each end of a suitable line wire, No. 20 gauge being the usual size, constitute the simple

form of telephone that will serve the practical requirements of a compact establishment where the line wires do not extend beyond a few hundred yards. The ordinary electric bell line wire serves all practical purposes as a telephone line wire, and this without interfering with the ordinary use of the bells. If precaution is taken when installing the electric bells to fix a bell push with a suitable attachment for the telephone, then we shall have all that is necessary for connecting the two telephone appliances. The ordinary existing bell wires will also serve every purpose, but some alteration is necessary to provide suitable connections. Many of the ordinary electric bell pushes are made with the additional pin and socket connections for attaching an extra length of flexible wire so that a pear push may be used at the bed side or elsewhere, and these pin and socket connections are just what are wanted for telephone connections. These pushes have a pair of sockets, one attached to each of the clamping screws; these sockets receive a double pin, coupling from which the flexible wire is extended to reach as far as may be desired. The making of telephones suited for the uses here described cannot be undertaken to advantage by an amateur; the component parts bought singly would cost more than the complete instruments ready for use. The instructions on wiring for electric bells gives all information necessary for fitting up the wiring of a domestic telephone installation. When several instruments are to be used at various points it is of course necessary to put in each circuit a switch of suitable construction to divert the circuit over any series of wires. Switches suited for any number of circuits that are likely to be required in practice will be found in stock at dealers in electrical sundries.

ELECTRIC LIGHTING

has become so general that some reference to the subject may well be expected here. The electric energy or current for lighting purposes is generated at the central stations

of the various electric supply companies, and is conveyed by mains laid in the public thoroughfares. In these respects the procedure resembles the more familiar practice of gas supply for illuminating purposes. Dealing here only with the lighting system as used for small installations for private houses, shops, etc. The currents supplied at the main may be either "alternating" or "continuous," and the voltage either "high" or "low." Before arranging the fittings it is necessary to know which system of supply will be available, and this is always clearly stated on the circulars supplied by the electric companies. An alternating current is constant, but continually changes its direction backwards and forwards, it may be one hundred times per second, whilst the continuous current flows in the same direction always. The terms high and low applied to the voltage or pressure of current do not define precisely any given pressure, but low voltage is usually understood to mean 100 to 110 volts, and high voltage from 200 to 220 volts. This voltage or pressure of the main supply is not standardized, and varies in different localities. In the Board of Trade regulations not exceeding 250 volts is a low pressure supply; not exceeding 650 volts a medium pressure supply; not exceeding 3,000 volts is a high pressure supply; and exceeding 3,000 volts is an extra high pressure supply.

The difficulties and dangers attending the use of the current for electric lighting unless proper precautions are taken are serious. The Board of Trade have made rules that must be complied with in all cases, and insurance companies also have something to say about the placing of live wires carrying electric current. These rules are made in the interests of public safety, and do not imply that there is great danger in the employment of electric current, but only that efficient safeguard must be provided when the voltage is high. For these reasons it would be unwise for an inexperienced amateur to attempt to lay the wires for electric lighting except under the immediate super-

vision of an expert in the subject. With reference to the supply of current for incandescent electric lamps the Board of Trade rules say:—The consumer's wires forming the connections to the incandescent lamp, or otherwise in connection with the supply, shall be completely enclosed in strong metal casing, and this casing, together with the switches and lamp holders, if metallic, shall be efficiently connected with earth. Switches, efficient fuses, or other automatic cut-outs shall be provided, so as to prevent the circuits from excess of current, and all switches and cut-outs shall be so enclosed and protected that there shall be no danger of any shock being obtained in the ordinary handling thereof, or of any fires being caused by their normal or abnormal action.

As a set off against the somewhat disquieting suggestions contained in the preceding paragraphs it may here be said that the electric light forms the safest of all illuminants when the installation is carried out with thorough efficiency. The best practical proof of this is shown by the term quoted by the fire insurance companies. There are many highly desirable qualities in electric light that commend it above others, amongst these are cleanliness in use, purity of light, coolness and convenience. There are other domestic uses to which the electric current may be put, such as heating and lighting, and the advantages of all these applications are set out in ample detail and perhaps somewhat prejudiced fervour by the companies who supply current. The reader who wishes to know more of the practical application of electricity should apply to the company who supply current in his district and he will readily obtain the latest and fullest details of what is available in his locality.

WIRE WORKING

Some knowledge of wire-working will be useful to the amateur, for with a file, a gimlet and Bradawl, and a pair of pliers, there are many useful bits of wire work that can be done for the

house and garden. For example, hanging-baskets in which plants are kept, can easily be made; wire trellis for walls, supports flat and circular for flowers—such as musk, fushsias, and sweet-peas—and sieves for sifting mould and ashes.

Wire is made in all sizes of copper, iron, and brass. When the diameter is larger than about $\frac{1}{4}$ inch, it can no longer be considered as wire, but is spoken of as a rod, whatever may be the metal of which it is made. The stoutest wire that the amateur will be likely to use will be about $\frac{1}{4}$ inch in thickness, and this will be chiefly used for imparting strength and solidity to wire-work, as will be seen presently. He will also want wire of various smaller gauges, and fine binding wire for securing wires that cross each other at any angle. The wire most suitable for binding is fine copper or soft iron, because these are pliable and therefore can be more easily bound round the wires that it is used to fasten together. For purposes where strength is not so much an object, the hard drawn tinned iron wire used for decorative purposes, such as binding evergreens to a rope to make a garland, is serviceable.

Galvanised iron wire is useful for making fences, especially to separate a lawn from pasture land for cattle. To fix fencing of this kind, stout posts are required at either end, with spurs or struts to enable them to withstand the strain of the wires. The intermediate posts may be slighter in size. When the wires are tightened the strain of the upper wires will have a tendency to drag the top of the posts towards each other. To resist this, a strut is placed in position at an angle of 35° , one end of which butts against the straining post, while the other rests on a stout board of timber, crossing it like the top of a T. The pressure of the strut against the board caused by the strain of the wires, is distributed all over the surface of the board, instead of being concentrated at the spot where the strut rests on it, and is met by the resistance of the earth. The wires are tightened by means of screws, with a loop at one end, and a nut and screw at the other. The wire is drawn as tightly

as possible through the loop, and secured by twisting the end round the wire. The nut is then screwed on the bolt, which is gradually brought forward, thus tightening the wire. The wires may be passed through holes in the lighter intermediate post made to receive them or pinned to the exterior of the post with a staple. Straining bolts may be used at each end of the wire, but if the fencing be short one set of bolts will be sufficient; the other end of the wire being passed through the post and looped a stout nail or piece of iron rod is passed through the loop to prevent its withdrawal.

Wire-netting is now extensively used for horticultural purposes, and is useful for making poultry houses, and cats do not climb over wire netting. Whenever netting is used for this purpose, care should be taken to have the netting high enough to prevent them from jumping over.

PAINTING

This section may be devoted to a consideration of, *a*, how to make or mix paint; *b*, the brushes and tools used by painters in applying paint to the surface to be painted; *c*, graining and the higher branches of house painting; *d*, the art of stencilling, and how it is managed; *e*, the method of imitating various woods and improving the appearance of woods used in house building; *f*, varnishes, their composition and the purposes for which the different kinds may be used; and, lastly, the appliances and preparations used in gilding. In each of these branches of the painter's trade only such points will be touched on as are likely to prove useful to the amateur. Nothing will be said about the work of the decorator, which, generally speaking, requires considerable taste and artistic power.

For the general purposes of an amateur it is much better and cheaper to buy paints and varnishes ready mixed, but for the benefit of those who desire to mix their own colours, it may be useful to give a few directions which will enable them to do so. The oil and colourmen mix paint to any ordinary colour generally at 6d., and sometimes

even at the low rate of 5d., per pound, ready for use. It is supplied in a tin can or an earthen pot, and in addition to all this the man generally will lend a brush wherewith to apply it. This is useful where painting is done but seldom; but when the amateur frequently uses paint it is desirable that he should possess his own brushes and other tools. These tools are very few, and they are mostly required for mixing the colours; the materials are the most important consideration, but these on the one hand are not expensive, and on the other may be easily obtained.

The advantages of being able to mix one's own colours, which advantages may be set against those of procuring paint direct from the oil and colourman ready for use, may be stated as follows: colour can be mixed in a very little time, especially if the materials are at hand; any quantity may be made—just as much as is wanted and no more—when perhaps only a few brushfuls are wanted; whereas ready mixed paint must be bought in bulk, and it can be mixed to dry either quickly or slowly, as circumstances may render it desirable.

The requisites for mixing colours are a marble slab or a piece of thick glass, about 18 in. square; glass or marble being specified because the smoother the surface the more effectually the colour can be ground; a muller, also made of glass or marble, and a palette-knife. This is a broad but thin and flexible steel blade, set in a wooden handle. It is useful for taking up pigment to put on the slab, for scraping together the colour which the action of the muller has driven from the centre to the sides of the slab, and for transferring the ground colour from the slab to the receptacle in which it is to be placed. This is generally an earthen pot specially made for the purpose, and as these are inexpensive, the amateur will find it convenient to keep half a dozen. A suitable piece of marble or glass for a slab may be procured and a muller made, completing the equipment.

The colouring-matter called pigment must be bought of the oil and colourman in powder; most pigments

are very cheap, although some, as vermilion and ultramarine, are more costly; the amateur, however, will require only those most commonly used, which are the cheapest. When buying the pigment he must also procure some *boiled* linseed oil, some turpentine, patent dryers, varnish, and gold size. The amateur must be very careful to get *boiled* oil, as raw oil will not answer; indeed, the use of unsuitable oil is the cause in most instances of the failure of the paint to dry readily. The varnish required is either copal or mastic varnish.

To prepare the paint the powder of the wished-for colour is laid upon the slab; if lumpy it must be crushed, a little boiled oil is poured on it, and with the muller give it a thorough good grinding. There need be no fear of powdering it too fine, because the finer the better. Sufficient oil should be used to bring it to a paste. The circular sweep of the muller will, as it has been said, have a tendency to spread the paint, and even to drive it off the slab; therefore when any portion of it is rather near the edge, the palette-knife should be used to bring it all in the centre of the slab, ready for further grinding.

Paint not required to dry very quickly, or say in about twenty-four hours, should have a little turpentine and about double the quantity of oil added. Paint mixed in this proportion will look bright when dry, and have a good lustre. If it is of importance that the paint should dry quickly and still have a glossy appearance, it should be mixed with turpentine and gold size added afterwards. A paint to dry in twenty minutes or half an hour, must be mixed with turpentine and without oil. When dry this paint will have a dead, lustreless appearance, and will require a coat of varnish afterwards to make it look as it ought. This is a method very often adopted for iron-work. All paint should be rubbed through a wire sieve or a piece of fine canvas to remove all lumps before applying it.

A little dryer added to either of the mixtures will make the paint dry quicker; gold size also causes paint to dry very quickly. The ordinary

dryers most in use are sugar of lead, litharge, and white copperas. Red lead is also an excellent dryer, but this from its colour cannot be used with all paints. Sugar of lead is the most expensive, but it is also the best. It is better not to mix dryers with delicate colours, because the tints are often damaged by their introduction. A good drying oil is made by adding two ounces of litharge to half a gallon of linseed oil. The oil should be allowed to boil slightly until no scum is thrown up to the surface; it must then be allowed to cool, and poured in a bottle for future use.

The brushes used are distinguished as "brushes" and "sash tools," the larger brushes being included under the former title, and the smaller ones under the latter, from their being employed in painting sashes, mouldings, and other small work; the larger brush being used to spread paint over broad, flat surfaces such as the styles, rails, and panels of doors, over which it can be passed very rapidly. The brushes are made of bristles set in wood, bound round with string or copper wire. In the wood the conical handle of the brush is also fixed. The oval brushes are said to be preferable to the round brushes, because they require less working to get them into a suitable shape for spreading the paint smoothly and evenly. To hasten this desired end, painters will often use in the place of a dust brush a round paint brush until it has been brought into decent working order.

In painting new work different methods are used from those in repairing old work. Before beginning to paint *new work*, all projections, such as lumps of glue, etc., must be cleared away with the putty-knife and duster. Then all the knots in the wood must be covered with *knotting*, to prevent the turpentine in the knots from oozing out and spoiling the painted surface when finished. The amateur is advised to buy the "patent knotting," which may be had of the oil and colourman ready for use. This dries and hardens very quickly. Then the *priming*, or first coat, is put on. This is made of white lead, with dryers, and a little red lead to harden it. It is made

very thin with oil, as unpainted wood or plaster absorbs the paint very readily. Sometimes new wood has applied to it a coat of *clear-cole*, which is a mixture of size and a little whiting. The suction of the wood is stopped by the clear-cole, but the after coat of oil paint does not adhere to the work as closely as it does when the wood is properly primed. Clear-cole, however, is useful on old and dirty wood which has never been painted, and on which, especially if greasy, oil paint would not dry.

After the priming is dry, all holes made by punching in the heads of nails, cracks, etc., must be stopped with putty. It is useless to attempt to do this before the priming has been applied, because putty will not stick to wood unless painted. After this has been done the *second coat* of paint may be applied; and for new work this should be made up chiefly of oil, because oil is most efficient in stopping the suction of the wood; then a *third*, and even a *fourth coat*, may be applied. When laying on the colour in the earlier coats the brush should be passed downwards and upwards and in every direction, to spread the colour evenly and work it well into the wood. Finally, the brush should be drawn up and down, or from one side to the other as the case may be, in the direction of the grain of the wood, taking care to leave no marks of the hairs of the brush. In painting a door, or any piece of work in which part is sunk and part raised, the mouldings or any bead-work should first be painted with a sash tool, and then the panels, styles, and rails with a brush. No paint should be laid on a previous coat until that is perfectly dry and hard; and before attempting to paint any work, every particle of dust that may have settled on it should be carefully removed with the dusting brush.

In painting old work the process is somewhat different; but in this, as in the case of new work, the successive steps of the operation will be described in detail from beginning to end. When about to re-paint old work, all dirt and projecting pieces must be carefully removed, and if the paint appears greasy it should be washed with turpentine. Whenever

patches of paint have come away through sun blisters or other causes, the bare parts must be painted over with a coat of priming. All defects must then be stopped and made good with putty, when the new coat may be applied.

When paint appears rough, especially in the case of patches in old work that have been re-touched, the surface, when dry, should be rubbed down with fine glass paper until the roughness has disappeared. All paint that appears loose round the blister-marks, should be scraped away with a knife before the putty is put on. For cleaning old greasy smoke-stained paint, lime-wash or soda-water may be used. This kills the smoke or grease, on which oil paint will never dry and harden. Some will put a coating of weak size over the smoke and grease; the paint will dry on this, but it is very likely that the under coat will soon crack and peel off.

The composition of the paint that is applied to old work, and indeed to wood generally, must depend upon the style or manner in which the work is to be finished. The first coat after the priming on new work should be paint in which the oil predominates over the turpentine; but for the first coat for old work the turpentine should be in excess of the oil. Paint mixed with oil in excess will present a glossy surface when dry, but paint mixed with turpentine in excess will present a flat appearance. Therefore, when a shining surface is required, it is necessary that the under coat should be paint mixed with turpentine, the final coat being mixed with oil; but when the finishing coat is to be "flat," as it is technically called, it must be mixed with turpentine and be laid over a coat mixed with oil.

It is not desirable to keep spreading on coat after coat of paint on old work. It is better, when successive coats of paint has become very thick, to remove the paint entirely and get down to the bare wood. There are various modes of removing paint. The professional painter will do it by the agency of heat, applying a flame to the surface of the paint; the heat soon softens the oil, and the coat may then be scraped off.

This necessitates the employment of a special apparatus. The amateur may save himself the expense of this by adopting one or other of the following modes.—(1) Make a very strong solution of common washing soda, and apply it to the paint with a brush, allow it to remain until the paint has softened so that it can be scraped away. (2) Slake 3 lbs. of quicklime in water, and then add to this 1 lb. of carbonate of potash, and sufficient water to bring the whole to the consistency of thick cream. Apply the preparation with a brush, and leave it on the paint for from eighteen to twenty-four hours, when it will be found that the paint is softened and may easily be scraped off.

On plaster a greater number of coats of paint are required than on wood, because plaster will absorb more oil than wood will. Thus, if three coats of paint are sufficient for wood, four and sometimes five coats will be wanted for plaster. Less paint is of course required when the plaster has had time to dry and harden properly, and indeed no paint should be put on plaster before it is perfectly dry.

In painting plaster, the first coat should consist of white lead well thinned with oil, and having a little litharge added to it to ensure its drying quickly. The second coat should be altogether similar in character. The plaster will now be saturated with oil to some depth below the surface, and to the third coat turpentine may be added, and some of the colour with which the walls are to be tinted when finished. The fourth coat should consist of paint of a darker shade of colour than that to be used for the finishing coat, mixed with equal quantities of oil and turpentine. The last coat should be mixed with turpentine only, and a little gold size to harden it and to promote quick drying. This coat, which is called "flatting" because it dries without gloss, should be somewhat lighter than the selected tint, because it will dry darker. In painting plaster, every successive coat should be allowed to dry thoroughly and to remain for some days before the next is put on; the last coat but one, however, should not be allowed to stand more

than two days before the finishing coat is laid over it.

The amateur may find it necessary to do his painting at intervals, often far between. Paint left in the pot for some length of time becomes too hard and thick to be used. The addition of some oil and turpentine may save a little of it, but it will neither work pleasantly, nor, indeed, be worth using. Whenever paint is put aside, a little cold water must be poured on the top of the paint. This prevents the evaporation of the oil, and keeps the paint liquid for future use by excluding the air and preventing its action in drying and hardening the oil.

Similarly, brushes not in use should have the bristles kept under water, that they may remain soft and flexible. It is better, however, when the amateur painter does not know how long it may be before he will use his brush again, to wash the colour well out of it by means of a little turpentine, and then to allow the brush to dry. If kept in water for long, the constant soaking will rot the string and the bottom of the wooden handle to which the bristles are attached, and on recommencing painting, the brush may snap off short. The meaning of certain expressions used in painting and the terms for certain combinations of coats given in painting, and the various kinds of coats that each term implies, are as follows:—

(1) Clear-cole and Finish.—Stop defects with putty, clear-cole, and finish with oil to colour as directed.

(2) Two Coats in Oil.—First turpentine colour, and second finish oil colour.

(3) Two Coats in Oil and Flat.—First turpentine, second oil, and third flat.

(4) Three Coats in Oil.—First oil, second turpentine, and finishing oil.

(5) Three Coats in Oil and Flat.—First oil, second turpentine, third oil and flatting.

(6) Four Coats in Oil.—Oil priming, oil second coat, turpentine third, and oil finishing.

(7) Four Coats in Oil and Flat.—Oil priming, oil second, turpentine third, oil fourth, and flatting.

It will be useful to mention the various pigments or colouring substances used to produce different simple colours, and to follow these with a list of colours that are produced by combinations of two or more of these colours. White lead is mixed with all colours to tone them down and produce different shades, hues, and tints. There are, however, other mineral whites capable of supplying the place of white lead, which have the advantage of being non-poisonous pigments; it will be convenient to classify each set of colouring substances, whether mineral or otherwise, under the colour which it yields when properly mixed.

TABLE OF SIMPLE COLOURING SUBSTANCES.

(1) **Whites.**—White lead, Zinc White (oxide of zinc—non-poisonous).

(2) **Blacks.**—Lamp Black, Ivory Black, Blue Black, Vegetable Black.

(3) **Yellows.**—Chrome Yellow, Naples Yellow, King's Yellow, Orpiment, Massicot, Yellow Ochre, Raw Sienna, Yellow Lake.

(4) **Reds.**—Vermilion (crimson and scarlet), Carmine, Cochineal Lake, Madder Lake, Red Lead or Minium, Indian Red, Venetian Red, Spanish Brown, Purple Brown, Orange Lead, Burnt Sienna.

(5) **Browns.**—Umber (burnt and raw), Vandyke Brown, York Brown.

(6) **Blues.**—Prussian Blue, Cobalt, Ultramarine, French Ultramarine, Blue Verditer.

(7) **Greens.**—Verdigris, Scheele's Green, Emerald Green, Green Verditer, Italian Green, Saxon Green, Brunswick Green.

TABLE OF COMPOUND COLOURS PRODUCED BY MIXING SIMPLE COLOURS.

Straw.—Chrome yellow and white lead.

Lemon.—Chrome yellow and white lead; more of the first than in straw colour.

Orange.—Chrome yellow and vermilion (bright), yellow ochre and red lead (duller).

Buff.—White lead and yellow ochre.
Cream.—Same as for buff; but with more white.

Gold.—Chrome yellow with a little vermilion and white lead; or Naples yellow and realgar.

Stone.—White lead and yellow ochre, with a little burnt or raw umber.

Stone.—White lead, and a small quantity of black.

Drab.—White lead, burnt umber, and a little yellow ochre (warm); white lead, raw umber, and a little black (cool).

Flesh.—Lake, white lead, and a little vermilion.

Fawn.—Same as for flesh-colour, with stone ochre instead of lake.

Peach.—White lead, with vermilion, Indian red, or purple brown.

Sky Blue.—White lead, Prussian blue, and a little lake.

Olive.—Black, yellow, and a little blue; or yellow, pink, lamp black, and a little verdigris.

Chestnut.—Light red and black.

Salmon.—Venetian red and white lead.

Chocolate.—Black, with Spanish brown, or Venetian red.

Sage Green.—Prussian blue, raw umber, and a little ochre, with a little white.

Olive Green.—Raw umber and Prussian blue.

Pea Green.—White lead and Brunswick green; or white lead, Prussian blue, and some chrome yellow.

Pearl Grey.—White lead, with a little black, and a little Prussian blue or indigo.

Silver Grey.—Same as for pearl grey.

Grey.—White lead and a little black.

Lead.—White lead with black or indigo.

Violet.—Vermilion, white lead, and indigo or black.

Purple.—Violet as above, with the addition of a rich, dark red, or colours for French grey.

French Grey.—White lead with Prussian blue and a little lake.

Lilac.—Same as for French grey, but with less white.

Oak.—White lead with yellow ochre and burnt umber.

Mahogany.—A little black with purple brown or Venetian red.

In addition to the above it may be said that *greens* of all shades may be produced by the admixture of the various blues and yellows. But, as it has been said, the amateur who is not disposed to mix his own colours may procure any shade of green, and any or almost any of the colours above described ready mixed for use in handy little tin cans at no more cost than he would have to pay any oil and colour man for mixed colours.

GRAINING

and marbling will scarcely be attempted by the amateur. Either when badly done is very unsatisfactory, while to do graining and marbling well requires considerable taste and artistic skill, and many years of practice. The painting of a common wood to imitate a more expensive one is called *graining*. To do this the colour for the ground, which is some light colour, generally yellow, is first laid on and allowed to dry. When thoroughly dry and hard, a coat of darker, rather slow drying paint called the overlay is laid upon the light ground, and while this is wet the surface is diversified by drawing over it combs of leather or metal and graining brushes. These take off some of the dark-coloured paint, and expose the light ground colour. When properly done it has a very good effect, but the amateur, unless he has a natural talent for painting, will find that the chief difficulty in graining is to do it properly.

MARBLING

—speaking of the commonest kinds only—is not so difficult as graining, although to the imitation of verd-antique, jasper, malachite, sienna, porphyry, etc., the same remarks apply that have just been made on graining. Common kinds of marbling are those usually known as white marble and black and gold marble. For the first kind, the surface to be marbled must be painted white; for the second, it must be painted black. On the white surface, veins and streaks of black and grey must be put on with a camel-hair pencil; diversity may be given to these streaks and veins by the use of a feather from a fowl's wing, used just as it is, or notched to produce various

markings. On the black ground veins of white lead, yellow ochre, and burnt or raw sienna must be made by the same means. The spaces between the veins should be thinly covered with grey or white, diversified with veins of a stronger and more decided white. Instead of a black ground a yellow ground is sometimes put on, which is diversified by broad, strong streaks of black. While the black is still wet, veins are drawn in it with a sharp-pointed stick, which removes the black and exposes the yellow ground below.

The leather and metal-graining combs with which graining in imitation of any kind of wood is done, may be bought at comparatively low prices of any oil and colourman. The amateur, indeed, may make his own leather combs, as they are nothing more than pieces of tolerably stout leather, notched on the edge. Of course different widths of teeth are required for different kinds of graining. Graining rollers are made for imitating various kinds of wood, but when these are used the effect produced is more monotonous than when the graining is done by hand.

For different kinds of wood, different coloured grounds are used. For example, for *dark oak* a ground of yellow ochre, venetian red, and white lead is used; for *dark wainscot oak*, chrome yellow, yellow ochre, and white lead; for *light wainscot oak*, yellow ochre and white lead only. The tints to be laid over the ground are, for *dark oak*, vandyke brown and raw sienna, and for *light oak*, burnt umber, finely ground, and raw sienna, mixed with turpentine and linseed oil in equal parts, and a little patent dryers. The overlay must be laid on evenly and smoothly, and the streaks and markings produced by wiping parts of this colour away with the combs already mentioned. The light smudges intended to represent the medullary rays are made by wiping away the colour with a piece of rag or wash leather.

DISTEMPERING

Distempering is done with colours prepared with size very much in the same way as whitewash; indeed, whitewashing, as well as all painting

done in size, is called *distempering*. The difference between painting in oils and distempering is just this, that in the former the colouring matter is mixed with oil and turpentine, while in the latter it is mixed with size and water. Ceilings are usually painted in distemper because a lighter effect is produced than when oil colours are used. Scene-painting is done in distemper, but in this the colours are laid on canvas, or some similar material. Distemper as applied to house-painting may be laid on wood-work, but it is not likely that it will stand long, for whitewash, when put on wood, soon dries, chips, and peels off. Generally speaking, distemper is applied to plaster only, and then the first thing to be done is to stop the suction or absorbing power of the plaster. Sometimes this is effected by giving the plaster a couple of coats of oil paint before the distemper is put on. This lends a richness to the colouring, but has the bad effect of increasing condensation on the walls in cold damp weather. The moisture thus condensed will ultimately trickle down the wall in little streams, and stain and otherwise injure the distemper.

The absorbency of the plaster is stopped by mixing about 10 lbs. to 12 lbs. of good whiting with water to the consistency of paste, and then adding to it enough size to bind it with about two ounces of alum, which hardens the distemper, and helps it to dry out solid and even, and two ounces of soft soap dissolved in water. These ingredients must be well mixed and strained through a coarse cloth, or a metal strainer. To ascertain whether enough size has been used, try the distemper on paper and dry it before the fire. If there is not enough size the composition will easily be rubbed off, but if there is enough it will stand any amount of rubbing without injury, except such as soils and stains from dirty hands.

Distemper colours should be laid on with a large flat brush in the same manner as whitewash; it is the better plan to close the doors and windows while the colour is being laid on, and to throw them wide open as soon as this is completed. The exclusion of the air

during the process of colouring prevents that which is laid on first from drying too quickly, which too often has the effect of showing the joinings of the patches in which the colour is laid on. The admission of the air as soon as the colouring is completed causes rapid evaporation of the moisture, and renders the whole surface uniform in tint. Of course the colour must be laid on evenly and smoothly, and the same consistency must be preserved throughout. Attention is necessary to the quality of the size that is used in mixing distemper. Good size may be bought of any oil and colourman.

In making colours for distempering, a wash must first be made of whiting forming a whitewash for ordinary purposes. The size must then be melted and sufficient added when warm to bind it. Then add sufficient pigment to bring the wash to the tint required, using, for *pink*, rose pink; for *salmon*, venetian red; for *lilac*, a little indigo and rose pink; for *light grey*, lamp black; for *French grey*, Prussian blue and lake; for *blue*, Prussian blue, indigo, or cobalt; for *green*, emerald green, or Prussian blue or indigo, and a little chrome yellow or yellow ochre; for *buff*, yellow ochre, to which a little venetian red must be added if a warm tint be wanted; for *drab*, burnt or raw umber.

Walls and ceilings coloured in distemper are suitably ornamented by stencilling. The pattern is cut in thin sheets of metal, or in stout paper; the perforated stencil plate, whatever may be the material of which it is made, is then laid against the surface, and a brush charged with colour is passed over the openings. The pattern is then removed quickly and carefully, and the design appears printed on the wall.

STAINING AND VARNISHING is preferable to painting for some wood-work in the interior of a house, and for exterior work under some circumstances, partly on account of the ease with which it is done, and partly on account of the durability of this mode of finishing wood-work, owing to the hard surface which

is imparted to it by the varnish. Repainting is rendered unnecessary, and the work never requires to be re-stained; the old coat of varnish may be cleaned by washing, and when the surface appears to want freshening up a new coat of varnish may be applied.

Three distinct operations are comprised in the process of staining and varnishing,—first: *staining*; second, *sizing*; and third, *varnishing*. The wood should be rendered as smooth and even as possible with the plane, and all knots covered, and nail-holes filled by mixing a little of the stain with plaster of Paris till it assumes the consistency of paste; sappy portions of the wood should be damped with water. The stain may then be laid on plentifully with a brush *along the grain of the wood*. When the wood is thoroughly dry, it must be *twice* sized, using each time a very strong solution of size, in the proportion of 1 lb. to a gallon of water. The amateur is cautioned against using size stronger than this, and he must not work his brush up and down when charged with size, for this, when the size is too strong, often produces a lather on the wood. It is best to apply size warm, and work the brush in one direction only, from top to bottom or from one side to the other, as may be necessary. If an interval of twenty-four hours be left after staining, before sizing, the colour sinks deeper into the wood and sometimes is softer and richer. As the resulting effect depends mainly upon the grain of the wood, well-seasoned wood of beautiful figure and variety in the grain should be selected for choice work. When the second coat of size is thoroughly dry, the work must be varnished. Exterior work should be sized once and varnished twice; and for rough work, boiled oil may be used for the finishing coat instead of varnish.

Different stains can be mixed to obtain a modification of their respective colours, and may be diluted with water to produce light shades. One coat of walnut stain upon the best pine produces a good resemblance to the best English walnut, and two coats will give deep-coloured foreign walnut, *under this stain, the pine grain*

showing the dark streaks characteristic of walnutwood. Where a great depth of tint is required, as in imitations of Spanish mahogany, two coats of these stains may be applied before sizing. The white woods, such as ash, beech, bird's-eye maple, elm, and American birch, owing to the greater boldness and variety of their grain, present a richer appearance than any of the coloured woods when stained.

In all operations of painting, staining, varnishing, etc., it is of the greatest importance that everything used, whether slab, muller, knife, or brushes, should be kept thoroughly clean. Directions have already been given for preserving paint and brushes from the hardening action of the air, by covering the former with, and immersing the latter in, cold water. This plan should be followed when but short intervals elapse between successive usings of the paint and brushes. When the painting is finished, and the brushes are to be laid aside, they should be cleaned immediately after using, and while the paint is still moist; then little difficulty will be experienced in cleaning them; but if left until paint or varnish is dry and hard, it will be both a troublesome and an unpleasant job to get them to a proper state. Brushes should never be allowed to harden. If paint brushes cannot be cleaned just after use, they should be kept in water until it is convenient to clean them properly. If cleaned whilst moist a little soap and water will make them as good as new. They are sometimes kept with the hair imbedded in a lump of grease, that prevents them from getting hard.

POLISHING

very greatly improves the appearance of articles made of any fancy wood or stained wood. There are many different sorts of polish; but those for which recipes are given below will be found to answer the amateur's purpose in every way. (1) *French Polish*.—Spirit of wine, 1 pint; gum sandarac, $\frac{1}{2}$ oz.; gum lac, $\frac{1}{2}$ oz.; gum shellac, $\frac{1}{2}$ oz. Keep the whole at a gentle warmth, frequently shaking the mixture until the gums are dissolved.

(2) *Naphtha polish*.—Wood naphtha, $\frac{1}{2}$ pint; orange shellac, 1 oz.; dragons' blood, $\frac{1}{2}$ oz.; benzoin, $\frac{1}{2}$ oz. Prepare in the same way as French polish.

(3) *Shellac polish*.—Orange shellac, $1\frac{1}{2}$ oz.; spirit of wine, 1 pint.

The method of applying these polishes is the same for all. A flannel rubber is made and dipped in the polish, and a piece of fine old linen is then put over the rubber. When the polish oozes through the covering dip the pad into or slightly moisten it with linseed oil. Another way is to strain the linen over the flannel pad, and then to moisten the linen with a drop or two of the polish, and a drop or two of oil. The pad should be held in the right hand, and the linen strained tightly, so that the pad may present a rounded surface. Apply the pad to the surface of the wood in a series of light strokes made by a circular sweep of the hand until the surface is nearly dry, when the pad should be passed up and down in the direction of the grain of the wood. When the rubber is dry some more polish and oil must be put upon it in the same manner as before and the rubbing continued. Plenty of what is generally called "elbow-grease" should be given to the work, and not too much polish. Beginners generally lay on a large quantity of polish, but this does not look well, neither has it a permanent effect.

No more polish should be laid on than is absolutely necessary: the polish should be well rubbed in and finished off with a little pure naphtha or spirit of wine, whichever happens to be the spirit that is used in the polish. The spirit should *at first* be laid on very gently and with great care, otherwise it will dissolve and remove the polish already laid on; but if proper care is taken its effect will be not only to give the polish a better gloss, but to render it more lasting. Some woods absorb a great deal of polish. In order to prevent this absorption, a bodying-in coat is given before the application of the polish. When polishing mahogany or other ornamental or coloured wood, should there be any inequalities or faults in any conspicuous part of the object, fill them up

with stopping, consisting of plaster of Paris mixed with water to the consistency of cream, tinted with stain or colouring matter corresponding with the colour of the article that is to be polished. A mixture of putty, consisting of finely-pounded whiting and painters' drying oil and some colouring matter, will do quite as well. For large holes a composition of beeswax, resin, and shellac is found very useful.

GILDING

may be described as the process of covering any substance, such as wood, plaster, leather, and paper, with thin *leaves* of gold stuck to them by gilders' size. It will be necessary here to describe briefly the materials used in gilding—that is to say, the gold leaf and gilders' size, the tools by means of which the leaf is applied to the surface to be gilded, and the processes known as oil gilding and water gilding.

Good gold leaf consists of gold beaten out by the gold-beater to extreme thinness. Even the best gold leaf is alloyed with silver or copper, because pure gold is too soft to be worked between the vellum sheets or gold-beater's skin. When beaten out thin enough for use the gold leaf is placed between the paper leaves of small books about $3\frac{1}{4}$ in. square, red bole being rubbed over the leaves to prevent the gold from sticking to the paper; each book contains twenty-five leaves. Inferior descriptions of gold leaf are made, which are sold at about half the price of the best, and "Dutch metal" is sometimes used as a substitute for gold leaf in cheap and common work. Dutch metal is copper coloured yellow.

The sizes used by the gilder are known as *gold size* and *fat-oil size*. The former is composed of 1 part of yellow ochre, 2 of copal varnish, 3 of linseed oil, 4 of turpentine, and 5 of boiled oil thoroughly incorporated. Before the yellow ochre is mixed with the other ingredients it must be reduced to the form of fine powder, and ground up with a little of the linseed oil. Fat-oil size is made by grinding stone ochre reduced to a very fine powder with old fat linseed oil. This should be made



and kept for some years before it is used. As it is ground up very stiffly so as to present the appearance of stiff paste, it must be mixed with a little fat boiled oil before it is used.

The tools required in gilding are a cushion, a knife, a tip, some camel-hair brushes, and some cotton-wool. The cushion is a piece of wood about 8 in. long and 5 in. wide, having loops underneath, through one of which the thumb is thrust in order to hold it, while the others serve to hold the knife and camel-hair brush. The top of the wood is padded with three or four thicknesses of baize or woollen cloth, over which a piece of wash-leather is tightly stretched. Along the back and one of the sides is a parchment ledge 3 in. high, which prevents the gold leaf from being swept off the cushion by any chance current or puff of air. The knife is a long, thin, flexible blade, set in a wooden handle like a palette-knife, and is used for cutting the gold leaf into pieces as may be required after it has been placed on the cushion. The tip is a broad, flat brush of squirrel's hair inserted between two pieces of card, and is used for taking up the gold leaf from the cushion, and placing it on the size. The camel-hair brush and cotton-wool are used for pressing the leaf into hollows and depressions, and for brushing away superfluous gold leaf.

Oil gilding and water gilding are thus distinguished in the former method, the object to be gilded is sized with glue size, and covered with two coats of oil paint and one of flattening, generally of a red or yellow colour. In water gilding, the wood is covered with several coats of whitening and size, until a smooth and substantial coating is produced. Oil gilding will bear washing with water, and is always of the natural colour of the gold, generally spoken of as "dead" or "neat" gold. Water gilding will not bear washing or wetting in any way; but may be burnished to brightness with a burnishing tool of agate. Oil gilding cannot be burnished.

The surface of the material to be oil gilt must be rubbed smooth, painted, and flattened. Some size must then be strained through muslin, and a little put on the palette and coloured with

yellow ochre or vermilion ground with it. The surface, or such parts of the surface as are to be gilded, must be well and smoothly coated with size, applied with a stiff brush of hogs' hair. When the size has hardened sufficiently so as not to come off when touched, but merely to feel sticky, the gold leaf may be applied. To gild the surface leaves of gold must be shaken out of the book upon the cushion, and each in turn must be laid out and flattened, and cut in pieces if necessary with the knife. The tip must then be passed over the hair of the head, to render it slightly greasy, and applied to the gold, which will stick to it, and is thus removed from the cushion and laid on the size. When the surface, or such parts of it as are to be gilded, are covered with the gold leaf, it must be firmly pressed into its place with cotton wool or a camel-hair brush or flattened down with a hogs'-hair brush, applied as in stippling—that is to say, by dabbing the points of the bristles on the gold. Nothing now remains to be done but to rub the gold over lightly with a piece of clean wash-leather. When japanners' gold size is used instead of oil size, the gold leaf may be applied about half an hour after the size has been laid on, or in about three or four hours if a mixture of one-third oil size and two-thirds japanners' gold size has been used.

The surface given to the wood by successive coats of size and whitening is covered in *water gilding* with gold size made of American bole, a little white wax, and some good parchment size. The size must be allowed to dry, and then clean water must be applied to it with a soft brush, and the gold laid on the wetted surface. The leaf will adhere immediately to the size. When laid on it has the dead appearance usual with oil gilding, but any portion of the gold or the whole of it may be burnished to brightness by rubbing it with an agate burnisher. Frames gilt in this way cannot be regilt by this mode of gilding without removing the coatings of size and whitening, and going over the whole process again from the very beginning. It must be remembered that water gilding will not bear washing, and must be protected in

summer time from fly stains, etc. The gilding of small articles has been greatly facilitated by the production of gold paint obtainable of colourmen.

PAPER-HANGING

In describing the plant required and the method to be followed in paper-hanging, let us first see what wall-paper is and how it is printed, or, technically speaking, "stained," the different description of wall-papers, the use of borders, and the general prices of papers for decorative purposes, which vary according to material, design, and colour. There are two kinds of wall-paper generally used in paper-hanging, one being of English and the other of French manufacture. The French papers may be distinguished from English papers by their narrow width, the English papers being 21in. wide and the French papers only 18in. Again a "piece" of English paper is 12 yards long, and a piece of French paper about 9½ yards, the former covering 7 square yards, or 63ft. superficial, and the latter 4½ square yards, or 41 square feet. Speaking approximately, where two pieces of English paper are required, at least three of French will be wanted, and in practice this will be found not to be enough.

The pattern on wall-paper does not come quite out to the edges, so in measuring a room for paper it must be remembered that 21in. in English papers and 18in. in French papers is the net width of the pattern itself, the actual roll of paper itself is wider than this. To measure a room, cut a rod or stick 21in. in length for English paper, or 18in. for French, and pass it round the four walls of the room, beginning in one corner and ending in the same, *omitting to measure the width of the window and the door with the rest of the room.* This is a simple and useful method for ascertaining the quantity required approximately, for the part that is allowed for the fireplace by this mode of measurement will, generally speaking, be enough to cover the space above the door, and above and below the window, and occasionally there will be dwarf cupboards in recesses, making spaces where no paper will be required. If, however, the room be very lofty it

may be as well to omit only the door or window in the first approximate measurement.

To give an example of this mode of measurement, supposing that the room is 18ft. by 15ft., the whole circumference of the walls will be 66ft., and supposing the door and two windows to measure, the one 3ft. 6in., and the other 3ft. 9in. each, this will have to be reduced by 11ft., showing a space of 55ft. to be covered with paper. Measurement with the 21in. rod will show that thirty-two breadths of paper are required—that is to say, thirty-two strips of paper 21in. wide. On the length of these strips, then, will depend the quantity of paper required. Suppose that the height of the wall between the skirting-board and cornice is 9ft.; then as the "piece" of paper is 36ft. long, it will cover four breadths; and as thirty-two breadths have to be covered, eight pieces of paper will be required. Had the height of the wall between skirting and cornice been 10ft., then a piece of paper, approximately speaking, would only cover three and a half breadths, and a little more than nine pieces would be required, and so on. Another method is to measure the circumference of the room, making allowance for doors and windows, and having ascertained the number of feet, multiply this by the height of the room and divide by the number of square feet in a piece of paper. Thus, taking the room as before to be 18ft. by 15ft., and allowing 11ft. for doors and windows, and taking the height of the room to be 9ft., between skirting-board and cornice we have:—

18ft. + 18ft. + 15ft. + 15 ft. (length of 4 sides of room) — 11ft. (allowance for door and windows) × 9ft. (height between ceiling and skirting) ÷ 63 (no. of square feet in piece of paper).

Or $66 - 11 \times 9 \div 63 = 55 \times 9 \div 63 = 8$ pieces, or a trifle more, as before.

But there must be waste in wall-papers, like all other kinds of material, and the waste will depend partly on the height of the room and partly on the length of the pattern; this length of pattern is shown on one if not on both edges of the piece by printed marks that will be readily

recognized by the amateur, now that their existence and meaning is pointed out to him. The smaller the pattern the less will be the waste, because the recurrence of the pattern is more frequent; and conversely, the larger the pattern the greater the waste; but then, again, it may happen even with a large pattern that the height of the room is such that the paper will cut in such a manner that the waste will be small. It is always customary to allow one piece in seven for waste; when buying papers, it is well to have at least a piece or so over for repairs, for this will often save the necessity of re-papering the room when the paper has been damaged here and there.

Wall paper is made in lengths of 12 yards, and the patterns are printed by means of blocks, generally speaking, although some few papers are painted in part by hand. Common, low-priced papers have the ground of the paper which is either white, pale brown, yellow or grey, to form one of the colours of the design, and on this one, two, or more colours are imprinted by blocks, so as to form a pattern. In cheap papers seldom more than two colours are used, and these are generally blues, purples, greys and drabs. Some cheap papers are sold as low as 2d. per piece, but these are not recommended, for they are so rotten and flimsy when damped with the paste that they will scarcely bear handling. Papers ranging in price from 6d. to 1s. per piece are good enough for many purposes.

Flock papers are made by smearing the surface of the paper in parts with flock gold size, made of linseed oil, litharge, Burgundy pitch, and other ingredients, and then powdering the parts thus smeared with flock. The flock consists of fine particles of wool formed by reducing pieces of old cloth to a state of powder, or very nearly so.

From the material with which walls are covered, let us pass on to the wall itself, or the ground on which the paper is to be hung. If the wall be new it will require sizing before the paper is put up. If the wall has to be re-papered, it must be stripped of the old

paper, though new papers are too frequently hung upon old papers, a procedure which is certainly not cleanly, and in many cases prejudicial to health, because the dampness caused by putting up the new paper often detaches the old paper from the surface of the wall, and oftentimes, if the paste used in hanging the old paper has been bad, a fungus is generated, which spreads over the wall in dark patches of a brown or greenish colour. In re-papering a room after it has been occupied by one stricken down with some infectious disorder, on no account should the old paper be left on the walls, but it should be carefully stripped and the walls washed, and the ceiling washed and coated with limewash. As soon as this is done, the walls may be sized and the process of re-papering proceeded with.

It may happen that the surface of a wall is too damp for papering, or that it has not been plastered, or having been plastered shows spots and patches of damp here and there, which would soon take the colouring out of any paper that was pasted over it, and inevitably destroy the paper itself in time. When this is the case, the surface of the wall must either be dressed with some preparation that will present a surface impervious to damp, or covered with an inner skin of canvas, on which canvas may be stretched, and between which and the surface of the wall a current of air may be constantly circulating, drying the wall and preventing the canvas itself from contracting damp and showing those signs that bear unmistakable witness to its presence.

With reference to curing damp in walls, for internal use on plaster, a varnish made by infusing shellac in naphtha may be recommended. The smell is detestable, it is true, but the result is all that can be desired. The liquid, when applied with a brush, soon hardens into a dark red solid coating, impervious to water, and on which paper may be pasted without fear of injury.

If the damp parts of the wall cannot be well treated in this manner, the wall must be battened; that is to say, strips of wood 2in. wide and 1in.

thick, must be nailed to the wall at intervals of about 18in., and over these battens canvas must be stretched. To get a surface as uniform as possible, the strips of canvas should be sewn together selvedge to selvedge. Whenever the canvas crosses a batten it should be nailed down to it with copper tacks or zinc nails, flat-headed and as short as possible, and the joinings of the canvas should have strips of brown paper pasted over them to hide the stitches in the seams. The canvas should be damped before it is stretched on the battens; it will soon dry, presenting a surface as tight and well strained as the vellum head of a drum. Sometimes this mode of forming a ground-work on which to hang paper is resorted to where walls have been covered with match-boarding, and the match-boarding being imperfectly seasoned has shrunk, exhibiting fissures between the edges. If paper were pasted over these narrow openings it would shrink in drying, and ultimately crack, rendering the appearance of the paper extremely unsightly.

When the ground-work on which the paper is to be hung is ready, the space to be covered with paper may be sized, though this is not necessary. The size should be applied warm, and with a large brush, which should be passed once or twice over the wall or canvas. Care must be taken not to work the brush up and down quickly or with great pressure, as this has the effect of making the size lather.

The tools absolutely necessary for the paper-hanger's work may be summed up as a pair of boards connected by hinges, which when supported on trestles form a suitable table on which the strips of paper to be pasted may be laid face downwards one above another. The amateur need not provide himself with a pair of boards and trestles merely for the papering of a single room; a kitchen table, or even a dining-table, suitably protected, will answer every purpose. The boards are portable, and therefore useful to the regular paper-hanger, who may not find any suitable table at the house to which he is going. They are also of greater length than most tables, which is obviously an

advantage. The amateur must of necessity have a pair of good-sized scissors, a clean pail to hold his paste, and a paste brush, something similar to that used for white-washing, but smaller.

Good paste for paper-hanging is made of rye flour, mixed to a milk-like consistency with water, and put in a saucepan to boil. A little size or glue may be added, which will increase its tenacity. A little alum may also be added to paste—this ingredient has the property of keeping paste sweet and wholesome. When boiled the paste should be of the consistency of ordinary gruel, and must be laid on the paper smoothly and equally with backward and forward strokes of the brush. Care should be taken not to load the brush with very much paste at one time, lest the paper should be rendered too damp. It will sometimes happen that through an over-abundance of paste a little is pressed out at the edges when the cloth is used to dab the paper against the wall. Any paste that makes its appearance should be removed by means of a sponge dipped in clean water, but the amateur must do his best to avoid smearing the colours of the paper. The colours will often be started in a slight degree by the influence of the damp paste, and if the surface be smeared the only thing that can be done is to paste a piece of fresh paper over the smear, which, if left as it is, will prove a continual eyesore.

If the surface of the wall is clean, smooth, and level, all that need be done is to coat the plaster or canvas with weak size. This is done because paper will stick better to a sized surface than to unsized plaster or canvas. If the wall has been distempered, the coating that it has received should be wetted with a brush dipped in clean water, and scraped with a piece of iron, such as a plane-iron, having a sharp smooth edge without notches. After scraping, the wall may be swept down with a stiff broom. If it happens that there are any loose bits of plastering, such as may have been produced by driving nails into the wall, they must be removed altogether, and the depressions

filled in with plaster of Paris ; or they may be well sized and pieces of thin but strong paper pasted over them. All cracks or holes should be filled with plaster of Paris, or have strips of paper pasted over them. After this the room may be sized for papering. In all cases when a room is to be re-papered it is recommended to damp the old paper and remove it entirely, and when there has been sickness in the room this is imperative, as it has been said.

Where to make a commencement in papering a room may be a bit of a puzzle to the amateur paper-hanger. It generally happens that of all parts of the room the chimney occupies the chief point of view. When this is the case it is desirable that the pattern on both sides of the chief central object should be similar. To effect this, find the centre of the chimney breast and at this point find the perpendicular by the aid of a plumb-line. Having cut a length of paper sufficient for the purpose, *divide it in the centre of the pattern*, either by making a crease which will come out when damped, or a pencil line down the back, and having pasted it fix it to the wall so that the crease or pencil mark directly coincides with the perpendicular shown by the plumb line. Half of the piece will then be to the right and half to the left of the centre of the chimney breast. The edge or edges of this piece of paper will perhaps not have been trimmed, but the edges of succeeding strips must be trimmed according to requirements, it being the rule to let the clean cut edge of all lap joints face the light. The outside end of the roll of wall-paper is always the part that should go uppermost. It is as well to mention this, although in the majority of papers the appearance of the pattern itself will be sufficient to indicate it.

The point at which the commencement is to be made having been settled, the next step is to prepare the paper for hanging. First it will be well to settle where the finish is to be made, that is to say, in what inconspicuous place the paper advancing from both sides is to meet and join ; and to prevent waste it will be necessary to take the measuring-rod and ascertain how much of the paper must be trimmed on

one edge, and how much on the other.

When it has been ascertained, by actual measurement how much paper is required for hanging on each side of the piece first hung, wherever it may be, proceed to cut the paper. The usual way is to unroll the paper for a yard or two, trim the edge on one side, roll up the paper just trimmed, lightly and loosely, and continue unrolling, trimming, and rolling up by a yard or two at a time till the other end of the roll is reached. Some will then trim the other edge, proceeding in the same way until the paper is rolled as it was before the trimming commenced, having the topmost part at the outer end. It is important to remember that whichever side is trimmed close to the pattern, the opposite side must not be trimmed closer than from $\frac{1}{4}$ inch to $\frac{1}{2}$ inch of the pattern. The edge that is not trimmed close need not be trimmed at all ; the chief object in trimming it is to leave as small an extent of overlapping as possible where the strips are joined together.

When the edges are trimmed the next step is to cut the paper into lengths suitable to the height of the room, and this, whether the overplus at top and bottom be much or little, must be done in such a manner that when the second strip is pasted up by the side of the first the pattern will join neatly and exactly, leaving the least possible traces of the line of junction. The "match" is shown by certain marks on the edge of the paper, and if it be found that a considerable length of paper be left either at top or bottom, or at both, it will be better and more convenient for the amateur in carrying out the operation of hanging each slip to cut off the surplus paper, leaving no more than an inch or two at top and bottom beyond the length between skirting and cornice. Cut the paper straight across, which can easily be done by aid of the pattern, and cut as many lengths as will suffice for one or two sides of the room to begin with. Lay the lengths thus cut face downwards on the pasting-board, letting the edge of each strip as it is laid down project a little beyond the edge of that which

is immediately below it. This prevents the paste from getting under the edges of the piece below when the piece above is being pasted.

As many strips as may be required having been laid one on top of another on the board, the first strip may be pasted, but judgment must be used as to the time that may be allowed to elapse before the paper is attached to the wall. If the paper be thin and unsubstantial, it must be hung as quickly as possible after the paste is put on; but if it be a stout paper, some two or three minutes may elapse between pasting and hanging; and a thick paper, especially glazed and flock papers, may be left even twice as long, to allow the damp to penetrate the paper and render it more easy of manipulation and less liable to be crushed or broken. For easier handling it is better to loop up the lower end of the paper, the paste causing the paper to adhere slightly where one part comes in contact with another. Then fold back the top, and putting the hands, which should be perfectly clean and free from paste, under this fold, attach the paper to the wall, bringing the top upwards to meet the cornice. Care should be taken beforehand to make a perpendicular guide line on the wall, or to see that the wood-work round the windows is perfectly upright, and this will assist the amateur in fixing the strips truly perpendicular. After attaching it lightly to the wall the plumb-line may be applied to see that the pattern is true and vertical, and if all is right release the fold, and after letting the paper hang straight down lift it away from the wall, except for about 6 inches or 8 inches below the cornice, and then let the strip go, when it will gently float down into its place.

The next step is to press the paper against the surface of the wall in every part, and for this purpose the amateur must be provided with a clean soft cloth. First of all, the paper must be pressed down the middle from top to bottom with firm but gentle pressure, avoiding all rubbing, which may have the effect of starting the colour and smearing and spoiling the paper. Then press from the centre outwards on both sides in a downward direction. The paper

in some cases will lie smooth and flat against the wall, but if the paper be thin there will in all probability be many wrinkles all over the surface. Do not attempt to press these flat. The paper has stretched under the influence of the moisture of the paste, and as it dries it will contract again and lay quite all over the wall to which it is attached. Lastly, draw the scissors across the paper just below the cornice and just above the skirting-board, making a crease. Then pull the paper gently from the wall as far as may be necessary, cut off the ends along the crease made by the scissors, and restore the ends to their places, dabbing them lightly as before with the cloth, which should be so doubled up as to form a large, loose pad. The second strip may now be put up in the same way. Here, however, the chief care will be to match the pattern neatly, for if the first strip be put up perpendicularly the other strips will be perpendicular as a matter of course. Nevertheless it will be as well for the amateur to test his work by the plumb-line to make sure that the paper is not getting out of the perpendicular.

If the amateur is not successful in his first effort, then all that can be done is to sacrifice the strip of paper, pull it down, and try again. As in everything else, practice is necessary to enable this kind of work to be done well and quickly. It will be advisable for any beginner to try his 'prentice hand in an attic or some small room of little consequence, in order to give him some idea of the way in which paper must be handled and attached to the wall. He will soon gain confidence, and find no great difficulty in papering other rooms where it will be absolutely necessary that the work be neatly and accurately done.

Unless the cornice be coloured in parts, having the principal tints in the paper repeated in it, the line of junction between the paper and the cornice above and the skirting board below seems hard and abrupt; and if this be the case when a cornice intervenes between paper and ceiling, it is still more so when there is no cornice, and the vertical planes of the walls abruptly meet the horizontal plane of the ceiling.

It was a feeling of this kind that led in the first place to the addition of borders to paper-hangings, which has the effect of diminishing, if not of entirely removing, this abruptness.

If borders are used they should be neat in design, and match the paper in this respect and in colour, or if the colours do not harmonize they should be in agreeable contrast. Borders are expensive in comparison with wall-papers. A cable pattern generally looks well, or the Grecian rectangular pattern, known as the Greek key pattern. The representation of a simple moulding is often very effective, and when the paper is plain in character and geometrical in pattern a floral border is admissible. It must be remembered, however, that a border tends to detract from the apparent height of the room, and therefore is not so well suited for a low room as for a high room, to which the horizontal lines of the border impart an appearance of breadth and space. A small and simple gilt moulding, which may be carried round the room above the skirting-board and under the cornice, or at the junction between the walls and ceiling where there is no cornice makes a very effective finish. The gilt moulding does not separate a coloured cornice from the paper in the same conspicuous manner as a border, and it shows up the paper in much the same manner as a gilt frame shows up an oil painting.

In the imitation dado style, the dado and the paper covering the upper part of the room, called the filling, are put on first, and the chair-rail or broad line of demarcation between the two last of all, care being taken to indicate its position by marks carefully adjusted by means of level and straight-edge, so that it may be truly horizontal or possibly preferably parallel with the floor when pasted up in its place. When a room is to be panelled, the surface of the walls must be marked out so as to show the position and size of the panels, and the width of the styles and rails of the framing, before any paper is put in its place. All this is a mere question of accuracy in drawing the horizontal and vertical lines marking out the respective parts; and it is obvious

that unless this be well and truly done, and the lines carefully followed when drawn, the work will be in vain, as anything out of the straight, whether vertical or horizontal, is most offensive to the eye. When the walls have been fairly marked out, the paper that composes the panels may be pasted up, and that which forms the styles and rails of the framing, taking care always that the corners of the styles and rails where they meet are properly mitred, unless corner-pieces specially made for the purpose are used. This done, the mouldings that cover and hide the junction of the other pieces of paper are put on, care being taken as before that they are accurately upright or level, and that the corners are properly mitred.

Of course there are various styles of paper panelling for rooms, but that which has been described will afford the key to the method of putting up all. An effective decoration in this style for a large room is formed by panels of pale green or rose-coloured paper covered with a diaper pattern in a darker or lighter tint, and edged by a gilt moulding, the styles and rails of the framing being formed of wreaths or lines of red and white roses on a pale, warm grey or cream-coloured ground, the latter being preferable. This style of decoration, however, is not well suited for the display of more than a few pictures—one, two, or three, as the case may be—within a panel, but their position is always governed and regulated by the panels. The pictures, in fact, spoil the effect of the panels, and the panelling carries the eye away from the pictures.

Dust will cling to any surface, and to paper-hangings as readily, if not more so, than any other. The best method of cleaning paper is to sweep down the surface with a soft cloth tied over the head of an ordinary sweeping-broom, and then to rub the paper lightly all over with stale crummy bread, using for this purpose a loaf cut in four pieces. The dust has an affinity for the cleansing substance, and is carried away by it, until the surface of the bread is so thoroughly impregnated with dirt that paper is soiled rather than cleaned by contact with it.

Varnished papers do not catch and hold the dust so much as those that are not, owing to the smooth gloss that the varnish imparts to the paper. The wall-paper to be varnished should first be sized with two coats of good, clear parchment size, after which it may be varnished, and it should receive two, if not three, coats. Varnished paper is especially suitable for halls, passages, etc., as the varnish renders it extremely durable, and gives a surface that may be washed with lukewarm water and a little soap, used sparingly and with caution.

GLAZING

The amateur's work in glazing will be confined chiefly to mending broken windows in house, greenhouse, or frame-light. He will seldom do any glazing on a large scale, unless it be necessary to re-glaze a frame-light, or cucumber-frame or any cold pit or place protected by glass, or to glaze a small greenhouse.

With regard to glass, the English-made kinds that are chiefly used in glazing are crown and sheet glass: these sorts are most in request for window-sashes and glazing generally; but for shop-windows and for the better kinds of houses plate-glass is generally used. Crown glass is made circular in form, with a thick lump called a bull's-eye in the centre. Before it is sent out it is cut into two pieces of semi-circular shape, one larger than the other, because the line of division must run on either one side or the other of the bull's-eye. Crown glass is not much used now, but formerly it was in great request, the thickened lump in the centre being cut out and preserved for use in cucumber frames, the windows of small cottages, etc. It is brought into the circular form by whirling round a piece of molten glass. Centrifugal force soon compels it to assume the form of a large flat, thin disc. Sheet glass is rolled, as its name implies, and so also is plate glass. The thinnest crown glass that is made is $\frac{1}{8}$ inch thick, but the better qualities are thicker. Sheet glass is distinguished according to its weight to the foot superficial, 15 ozs. and 21 ozs. being the thicknesses most commonly

used, although it is made as heavy as 42 ozs. to the square foot. The price varies according to size and quality, the qualities being distinguished as best, seconds, thirds, and fourths.

The glass that is most commonly kept, and sold by oil and colourmen and those who cut glass for the trade, is Belgian sheet glass, and this the amateur will chiefly use. It is good enough for all ordinary purposes, and cheap. The amateur is recommended always to have his glass cut for him instead of attempting to cut it himself, although if he be living at some distance from a town, it may be necessary for him to be able to cut his own glass.

It is, however, desirable that the amateur should possess the means of cutting glass, as it will often happen that through want of skill in taking measurements, or through inattention of the glass-cutter to the measurements given to him, the glass will not fit. If it be too small there is nothing to be done but to get a larger piece; but if it be too large it can easily be reduced to the size required. It requires some little knack and practice to use a glazier's diamond, which must be held at a particular angle to cut glass. The angle may differ slightly for every diamond used for this purpose, and the inclination to the glass at which the diamond will best do its work must be ascertained by actual trial. The amateur will not cut pieces of glass of large size, and therefore a board measuring 3 ft. by 2 ft., or 2 ft. 6 in. square, or even 2 ft. square, will be large enough for a cutting board, and its surface should be perfectly true and level.

The best tool for cutting glass is the glazier's diamond, which consists of a handle about 6 in. long, flattened on two sides that it may be more easily grasped with the thumb and fingers, and fitted at the lower end into a piece of steel of rectangular shape, and bevelled at the bottom. The diamond projects from this bevelled end, and the face of the bevel should be held parallel to the surface of the glass. The edge of the diamond makes a clean cut in the glass, and by applying a gentle pressure the parts thus cut will come apart with a slight snap.

Fortunately, for those who do not feel disposed to pay the price of a glazier's diamond, a cheap tool for cutting glass is to be found in the steel wheel glass-cutter. It consists of an iron handle, shaped so that it may be firmly grasped with the fingers and thumb, and bevelled at the lower end. This end is slotted to receive a small steel wheel of extreme hardness, whose circumference projects for a short distance beyond the surface of the bevel. When this sharp-edged wheel is drawn over a piece of glass, a considerable degree of pressure being applied, the circumference cuts the glass, which may be broken apart along the scratch thus made. Owing to the inability to keep the same pressure on the instrument throughout its course along the glass, the scratch made by the wheel of the cutter is not always complete, and the glass may break irregularly.

On the side of this glass-cutter there are notches of different widths. These are to enable the operator to break off any projecting pieces of glass that yet remain beyond the crack. This is easily done, and usually without injuring the piece that is wanted for glazing. Sometimes through an accident the glass will be broken; and so, although this glass-cutter can be recommended for reducing pieces of glass that are a little too large or for cutting glass at odd times to repair breakages, it is for this very reason and to avoid waste that the amateur is advised when he has a heavy job of glazing in hand to get his glass cut for him, or to buy it ready for use from some wholesale dealer in glass for horticultural and other purposes. A putty-knife will be required, without which it is impossible to finish the puttying by which a pane of glass is secured in its place, and to bring the putty to an even bevel, slanting from the surface of the glass to the outer surface of the frame, so as to throw off the water that falls on the glass. For cleaning out the remains of a broken pane and the putty by which it is held, and which has grown extremely hard by age and exposure, a hacking-knife should be used. It has received this name because the removal of old glass and putty from a sash-frame is termed "hacking out."

The knife itself is a stiff, wedge-shaped blade, broad at the back and bevelled to a sharp edge, inserted between two pieces of stiff leather which serve as a handle, and which prevent the blows given to the knife by the hammer from jarring the hand. Some amateurs try to do this kind of work with their putty-knife or a chisel, much to the detriment of either.

When replacing a broken pane of glass, first the broken glass and putty must be removed with the hacking-knife, leaving clear the rebate into which the glass has to be fitted. If the injury done to the glass be but small, an effort should be made to preserve the largest piece intact by cutting round it with a diamond or glass-cutter and pushing it out, holding a lump of putty against it that it may not fall and be broken. Sometimes it may be taken out whole without cutting round it, but cases in which this is done are very rare.

The rebate having been cleared, next measure the length and breadth of the opening *inside* the rebate. Supposing, for example, that the exact measurement of the opening to be glazed is 18 in. by 12 in., an allowance should be made for fitting, and the glass should be cut $\frac{1}{4}$ in. less each way, that is to say 17 $\frac{3}{4}$ in. by 11 $\frac{3}{4}$ in. The glass is thus $\frac{1}{8}$ in. less every way than the opening that is to receive it, and insures its going in easily. The measurement may be shown by marking the length and breadth of the opening accurately on a lath; tell the glass-cutter that this is the exact size of the space to be filled and he will then take care to cut the glass a trifle less in length and breadth that it may slip easily into its place.

The glass having been procured ready cut to size, or cut by the amateur if he possesses the appliances for doing the work, a bedding of putty must be carefully laid all round that part of the rebate against which the glass is to be placed. The pane is then pressed in firmly against it, the necessary pressure being given by rubbing the thumbs along the edge of the glass. When the glass is firmly fixed in its place putty must be applied all round the edge of the pane outside and shaped

to a bevel by the aid of the putty-knife. The surplus putty that has been forced out on the inside of the pane by the pressure used in putting the glass in its place must also be removed.

Putty used in glazing is made of whiting mixed with as much raw linseed oil as is necessary to form it into a stiff dough, but it is advisable to buy ready made putty rather than to attempt to make it. When putty has been allowed to get hard it may be restored to its former condition by heating it and working it up again while hot. This is the reason why a piece of hardened putty grows plastic when worked up with the hot hand. For iron frames, or in any position where the rebate is of small size and but little putty can be used to fix in the glass, some white lead may be mixed with the putty, or putty may be made of white lead and litharge specially for the purpose. To avoid the bad effect of white putty near to putty that has been painted, when mending a broken window, some colouring matter may be worked up with the putty to assimilate its colour as closely as possible to the colour of the painted part. Soft and new putty should always be used for bedding glass, because it is yielding and plastic, and will give way to the pressure brought to bear on the glass to bring it into its place.

The best way to preserve ordinary putty from cracking is to paint it as soon as possible after it is put on; and when putty has dried and cracked to such an extent that it allows the wet to enter, it is best to remove it and substitute fresh putty, or to run a brush charged with priming over the putty, working the bristles well into the cracks, and then to rub soft putty into the cracks to fill them up, after which the work should receive at least two coats of paint.

Hard putty may also be softened by drawing a hot iron along it, and this mode of taking glass and putty out of old frames and garden-lights will be found useful when it is necessary to proceed to re-glazing. Care, however, must be taken when using the hot iron not to injure the wood-work. A frill-iron used by laundresses will be

found to be just the thing for this purpose.

Before glazing a new frame or any new wood-work the frame or sash, or whatever it may be, must first be primed or painted with the first coat of paint. Putty will adhere readily to either glass or paint, and harden, but for wood in its natural state, or for stone, putty has but very little affinity, and for this reason it is necessary to paint wood-work before any glazing is done.

To clean glass, a little soap and lukewarm water may be used, and when the surface of the glass begins to dry it may be polished with chamois leather. When glass is very foul and dirty, it is useful to dissolve a little ammonia in water, and apply the solution thus made to the glass with a piece of rag; and ammonia in the water takes hold of and removes every particle of dirt, leaving the glass, after it has been polished clear, and translucent.

It is sometimes necessary to darken glass, or to produce an imitation frosting on the surface to render it semi-transparent, or so that while light can pass through it is not possible to see through it. For temporary purposes, a solution of Epsom salts, brushed over the glass, will immediately crystallize, the decorative crystals forming all over the surface; but when anything more durable is required, a little oil-paint should be used. In this kind of work a painter's brush should be used—one that is tolerably well worn is better—and a little colour of suitable tint being taken up on the ends of the bristles, it should be dabbed all over the inside surface of the glass, in a manner resembling "stippling." On glass treated in this way a pattern may be traced with the blunt end of a thin stick, giving the appearance of a clear pattern on ground or frosted glass.

It now only remains to give a few memoranda with regard to glazing that will be useful to the amateur, which cannot conveniently be classified under any of the sections in which the entire subject has been divided and grouped for greater facility of treatment. First, with regard to the mode adopted for cutting circular

panes. The centre of the circle to be cut having been ascertained by measurement, over it is placed a flat plate about the size of a penny, having a hole sunk in the centre in the upper surface. This is covered with beeswax or some substance that will cause it to adhere to the glass on the lower surface. An arm, having a pivot to work in the hole sunk in the plate, and carrying a socket which holds the diamond, and by which the diamond can be moved to any desired distance from the centre, is then placed over the glass, and the pivot is held with one hand firmly in the hole sunk in the plate while the diamond is carried round in a circle with the other hand, cutting the glass as it goes.

Pieces of glass bought ready cut will be found to have the edge left by the diamond rather rough. For window-panes this is of no consequence whatever; but when it is necessary that the edges should be straight and smooth, and the corners taken off, this can be done by rubbing them on a flat piece of stone, with a little sand and water or emery and water. When it is necessary to frost one side of a pane or piece of glass, this can be done by rubbing the surface required to be frosted upon a flat stone with emery and water. When two pieces are wanted their surfaces can be frosted and brought quite true by rubbing them one against another, with emery powder and water between.

For making holes through glass, a common hard steel drill, of the size of the hole required, should be ground to a rather sharp point. The drill must be placed on the glass at the spot to be pierced, and caused to revolve, preferably with an archimedian drill stock. The sheet of glass must be bedded on putty, which greatly contributes to the success of the operation, because, although sufficiently unyielding to keep the glass up to the drill, it has a certain amount of elasticity. A more rigid material will not be found to answer. The drill should be kept lubricated with turpentine. It is easier to drill a small hole in glass than a large one, but with care and proper attention to the bedding, even large ones may be successfully bored.

A piece of glass tube can be cut without much difficulty with a common saw file.

DAMP WALLS AND BRICKWORK

To cure dampness in a brick wall is far more difficult than to take proper means at the outset to prevent its occurrence. If a house shows damp on all sides just where the walls rise from the ground, the only effectual cure is the insertion of a damp course just above the ground line. This can be done by degrees, and although productive of much dirt and discomfort while the work is in progress, it can be effected without any danger to the stability of the building as the course of bricks taken out for the insertion of the damp course can be removed in short lengths, and replaced immediately by the damp course as the work goes on. It will be understood that allusion is made to these matters, not with any idea that the amateur artisan can do work of the kind on his own behalf, but that it is necessary for him to know something about it.

The rising of damp in brick walls can be effectually stopped only by the insertion in the wall of what is technically called a "damp course" *above* the ground line, or about a course of bricks above the line where the earth comes in contact with the brickwork. A damp course *below* the earth line is not effective, because the bricks above it will absorb moisture, though not to so great a degree, from the earth that may be in contact with them. A simple and effectual damp course is made by laying a course of slates completely covering the wall as soon as it has been brought about a brick's thickness, or, in other words, 3in. above the ground line. The slates should be laid in Portland cement, and it is as well to lay two or three courses of bricks immediately above the damp course in Portland cement also. Asphalt is sometimes used as a damp course; this is cheap and effective, but almost beyond the management of the amateur; and damp courses are made in glazed earthenware, pierced to allow of ventilation. Water cannot make its way through slate, asphalt,

or glazed earthenware, hence the fitness of these materials for a damp course.

If damp has been caused in the upper part of a house through the breakage of a water-pipe, or the stoppage of a gutter or waste-pipe, the first thing to be done is to remedy the primary cause of the evil. The overflow of water in rain-water pipes and guttering is often caused by the presence of a bird's nest, which prevents the escape of water through the proper channel, and for this reason it is desirable to have the guttering and heads of all pipes inspected and cleared once a year, say about May or June.

When a wall is really saturated it is well, if possible, to cut away the wet plastering on the inside, a little beyond the limit to which the water has penetrated. If this is done the wall will dry all the quicker, under the influence of the sun and air outside and heat inside. The plaster must then be renewed, and the wall repointed outside. This is the most effectual way of repairing the damage, but with an inhabited house it is not very often that a room can be vacated sufficiently long to admit of this mode of cure, and then other methods must be adopted.

As soon as the wet plastering has become moderately dry, it is desirable to cover it with wall-paper to hide the damp and cover over the ugly appearance, even though the wall be cold and moist to the touch. It is yet sufficiently wet to destroy any paper that may be pasted over it. Sometimes an undercoating of damp-proof paper is applied to the wet surface, and the wall-paper is pasted on this; but the waterproof papers do not always answer the end for which they are specially intended, and a solution of shellac and naphtha, in the proportion of about four ounces of the former to a quart of the latter, is more effectual. This solution, when applied to the damp surface of the plaster, almost immediately hardens into a varnish impervious to water, and as soon as it is hard and dry, the wall-paper may be pasted to it. It gives a reddish colour to the wall, but this matters little, as it is covered over and hidden from view by the paper. The smell of the naphtha is most unpleasant,

but this soon passes off, and the inconvenience falls chiefly to the share of the workman who applies the varnish. This kind of work any amateur artisan ought to be able to do.

A coating of coal-tar applied hot to the exterior of a brick wall will prevent the entrance of damp; but although well enough for brick work that is below the ground level and hidden from view, this is unsightly when above ground. A small quantity of naphtha is sometimes added to the tar, but the tar, plain and simple, will do quite as well. Another plan for walls above the ground-level is to cover the surface with a couple of coats of a mixture of one part of Portland cement with two parts of fine sand, and add water enough to bring the ingredients to the consistency of thick cream. When it is quite dry finish with a coat of paint. In the case of brick-work that is below the ground-level, the earth must be removed, and the brick-work exposed to the air to allow it to dry a little before the tar, or any other coating that may be used, is applied. In such cases it is useful to dash fine sand against the tar, until the surface is thickly covered with it, and in a few days to apply another coating of tar, which should be sprinkled with sand as before. When the tar has hardened, the earth may be filled in. The methods of preventing damp, above described, are such as come within the compass of any one of comparatively slender means.

When a brick wall has settled, and the mortar has hardened, the outer surface is usually finished by "pointing," which consists in raking the mortar from the joints between the courses of bricks, and filling them up again with mortar specially prepared for the purpose. There are two kinds of pointing, distinguished as *flat* pointing and *tuck* pointing, the latter being more ornamental than the former. As soon as the joints have been raked out, it is usual to colour the brick face with a wash prepared for the purpose, in order to produce a uniformity of appearance on the face of the wall; but this need not be done when the bricks are good and of the same colour throughout. A

mortar is then prepared consisting of one part of lime to two of fine river sand, and enough fine ashes to impart a blue colour to the mortar. The joints are then filled with this, well pressed in with a trowel, and if left level with the face of the bricks, the pointing is styled *flat pointing*. This flat pointing sometimes has a thin white line laid over the blue mortar, in the centre of the blue line, so as to show a narrow blue line on either side of the white line. The mortar used for the white lines is plasterer's putty, not glazier's putty, which is a different thing altogether. Plasterer's putty is fine white lime, having so much water added to it that the lime is fairly held in solution. The water is then allowed to evaporate until the pasty settlement that is left behind is of suitable consistency for working. The mode by which an even edge and regularity of width is given to the white line is this. It is first laid over the blue mortar so as almost to cover it, and when it has nearly set, a straight-edge is applied, first to the top and then to the bottom of the white line, and the redundant putty cut away with a knife or any thin and tolerably sharp steel blade. When this has been done to all the joints, horizontal and vertical, the effect is produced of a white line on a blue ground.

Tuck pointing is done by trowelling the mortar along the joint so that it lays at an angle with the face of the bricks. The amateur may occasionally require to point old brickwork, and most likely it will want cleaning down before re-pointing. The first thing to be done is to give the brick-work a good brushing with a birch-broom or bast-brush, which will have the effect of clearing away all the dirt and dust that is adhering to it. After this the mortar joints must be raked out and a second brushing given to the wall. The best kind of mortar for pointing work of this kind is Portland cement and fine sand in equal parts, mixed up in small quantities at a time, so that it may not become hard before it is used up. When mixed it must be placed on the mortar-board, which the amateur artisan will hold in his left hand,

while he applies the mortar or cement with a small trowel held in the right hand. As he proceeds with the work, and before each piece has had time to harden, the surface should be worked over with a paint-brush dipped in water. This will impart a smooth surface to the cement, and fill up any little crevices that there may be in the face of the brick-work, effectually disposing of any insect life that may lie lurking in the crevices. If the old brick-work be very roughly laid, so that the ends and sides of some of the headers and stretchers extend much beyond the plane of the wall's surface, it will be as well to reduce the prominent bricks to the ordinary level, especially if the wall is to be plastered.

PLASTERING

The material used by plasterers is classified as "coarse stuff," "fine stuff," and "gauged stuff." These differ one from another in the materials used, their relative proportions, and the manner of preparing them. The usual process of plastering consists of "rendering" with coarse stuff, "floating" with fine stuff, and setting with "gauged" stuff.

Coarse stuff is common lime mortar, with a small quantity of hair mixed with it in order to bind it well together. The proportions in which the lime, sand, and hair may be mixed to form coarse stuff are, lime-paste, 6 parts; sand, 12 parts; hair, 1 part. The hair used is cowhair, procured from the tanyard, where it has been scraped from hides.

Fine stuff is lime paste thinned with a moderate quantity of water, to the consistency of cream. It is then allowed to settle, the surface water is poured off, and the remainder is left to stand until it has hardened sufficiently for working. A little sand is then added to it, and it is used as a coat over the first coating of coarse stuff.

Gauged stuff is formed by adding 1 part of plaster of Paris to 3 or 4 parts of fine stuff. For finishing off repairs this preparation may be used with considerable advantage, but the amateur must remember that the addition of the plaster of Paris will cause the mixture to *set* or harden very rapidly,

and that no more must be mixed at a time than the operator is able to use expeditiously.

With regard to quantities of material used in plastering, it is estimated that 1 cubic yard of chalk lime, 2 yards of sand, and 3 bushels of hair will cover 75 yards of *render and set* on brick, or 70 yards on lath. The same quantity will cover 65 yards *plaster or render*, two coats *and set*, on brick, or 60 yards on lath. Floated work will require about the same as two coats and set.

The thickness of the coating with which a wall is covered will of course influence the quantity of cement that is used in the operation. According to the thicknesses given, 1 bushel of cement will cover $2\frac{1}{2}$ superficial yards half an inch thick. From this it is easy to calculate the quantity of cement required when the area to be covered and the thickness of the required coat is known. It must be remembered that the cement is weakened by the addition of sand, and that if a strong and durable coating of stucco is required, it will be better to use equal proportions of sand and cement. A useful and sufficient thickness will be found in $\frac{3}{4}$ -in.

A *hod* of plaster is reckoned to be about $\frac{1}{2}$ bushel; 2 bushels of grey lime or 3 of blue lias are equal to 1 bag; 20 bushels of sand go to 1 yard; 3 bushels of cement make 1 sack; and a cask of Portland cement contains 4 bushels; 14 pounds of plaster of Paris constitutes 1 bag, and 7 bags make 1 bushel.

In addition to the above memoranda, which may prove useful in calculating quantities required and in buying, it may be desirable to remind the reader that a bundle of laths contains from 360 to 500 feet run, whatever may be the length of each lath, whether long or short. It is reckoned that 1 bundle of laths and 500 nails will cover about $4\frac{1}{2}$ superficial yards. The single fir laths are about $\frac{1}{2}$ to $\frac{3}{4}$ in. thick, and often less than this; the stouter or double laths are about $\frac{1}{2}$ to $\frac{3}{4}$ in. thick.

The tools required by the plasterer are hammers, trowels, floats, moulds, and brushes. These will be all that the amateur-artisan will want, as it is

unlikely that he will try his hand at anything beyond mere repairs. The hammer used by the plasterer has a face on one side, for striking nails, and an axe-shaped blade on the other, with a nick in the bottom of the blade. This blade is used for chopping and breaking laths to the proper length when necessary. The nails used for attaching laths to the proper length when necessary. The nails used for attaching laths to quartering of partitions, or joists of ceilings, are furnished with a head, and resemble, in some degree, small clasp-nails. For putting on coarse stuff the ordinary bricklayer's trowel may be used; but for laying on fine stuff, and smoothing the finishing surface of a wall, a laying trowel of peculiar form and make, with the handle springing from and parallel to the blade, is required. It will be readily seen that plaster can be spread easily and smoothly with a trowel of this construction. The little square mortar-board on which the plaster is held for the plasterer's use, is technically called a "hawk." The float is a long straight-edge, broader in the middle than at the ends, which is dipped in water and worked over the surface of the plaster in order to render the surface perfectly level. This name is also used for a wooden tool properly a "darby," similar in shape to the laying trowel, but several feet in length, which is also dipped in water and worked over the plastering to produce a smooth and even surface. The kind of brush chiefly used by the plasterer, whether for applying water to the surface of his work or for washing the dirt off walls that are to be re-coloured, or ceilings that are to be re-whitened, is one from 4 in. to 6 in. in width across the broad part of the handle, to which three tufts of long hair are fastened, the whole spreading out into a broad, flat brush capable of holding a good deal of water or colouring matter, and of being worked over the surface of plaster without doing more than remove the external coating of dirt and colouring matter when the wall or ceiling is being cleaned.

We must now consider plasterer's work as relating to the inside of a house in coating walls and ceilings. First there must be some surface to which to apply the plaster. This

exists in all brick and stone walls and brick nogging partitions in the rough surface that brickwork or stone-work presents, and to which plaster will readily cling; but in ordinary partitions of framed timbers or quartering an artificial surface must be created on which the plaster may be laid. This is effected by means of laths, which are nailed to the timbers or the lower faces of the joists of a ceiling.

Whether it be for the formation of a ceiling or a partition, laths must be nailed all over the exposed timbers at distances which will vary from $\frac{1}{4}$ inch to $\frac{1}{2}$ inch, according to the breadth of the laths. The interstices between the laths render the surface far better for coating over with plaster than a smooth surface; for when the mortar is rendered over the laths part of it penetrates between them, and keys the plaster to the laths, and when hard it is difficult of removal. A lath-and-plaster partition between two rooms, or between a room and a passage, must be covered with laths, and plastered on both sides. The first coat of plaster, whilst still soft, is scored over by means of the trowel with rough diagonal lines about $\frac{1}{4}$ inch deep and 2 inches apart, and these rough and deep lines serve to hold the second coat of plaster to the first in the same manner as the interstices between the laths gave material assistance in holding the first coat.

WHITEWASHING

Walls and ceilings fresh from the hands of the plasterer require no preparation prior to whitewashing; but when either wall or ceiling has got dirty through dust and smoke, all the dirt must be washed off before any attempt is made to whiten or colour its surface. It will be as well to begin with a description of the washing process. The operator should stand on a strong table, or on scaffold-boards supported on trestles, so as to be within easy reach of the ceiling. Dipping his large brush in a pail of clean water, he should then draw it slowly backwards and forwards over the ceiling, pressing the hairs of the brush firmly against it, raising the brush frequently, and changing the water as

often as it gets fouled by the dirt that comes away from wall or ceiling on the brush. Continue the washing until scarcely any soil is communicated to the water by the brush. When the dirt is completely removed, let all roughnesses be scraped down, and cracks carefully stopped with plasterer's putty.

The best liquid coating that can be used to whiten or re-colour the walls and ceiling is undoubtedly limewash—that is to say, a wash made of lime; but under the influence of the air, and any emanation from sinks—that is to say, all foul gases—wash made with lime is apt to turn black, and although it has done its work as a purifier by neutralizing the foul matter that is floating about, its whiteness has gone, and its former beautiful appearance is altogether lost. Another kind of mixture is therefore generally substituted for limewash, and this substitute is whiting, a pure white chalk that is moulded at the place where it is prepared into large irregular lumps, in which state it is kept and sold by oil and colourmen.

There are different modes of preparing whitewash from whiting. One way is to place it in cold water over night, and allow it to soak till the morning, when the ingredients may be incorporated by stirring until a smooth cream-like mixture is produced. A little strong size should then be made, and poured into the whitewash to the extent of $\frac{1}{4}$ pint of size to a gallon of whitewash. The presence of the size prevents the whitening from coming off when dry on anything that may be drawn against it in passing. It is generally supposed that whitewash prepared in this manner is durable, and will never rub off; but no whitewash, however strongly it may be sized, will stand in a damp position, or where it is exposed in any way to the action of damp. Dampness in the air deprives the size of its binding power, and as soon as this is destroyed the whiting will come off on anything that comes in contact with it.

Another method of making whitewash with whiting is to mix as many balls or lumps of whiting as may be required with as much water as may be

needed to reduce it to a thick paste ; about $\frac{1}{2}$ lb. of hot size may then be added for every lump of whiting that may be used, and with the size, which should be hot, a small quantity of blue-black should be thrown in, which, when incorporated with the mixture, makes it a "good colour," as it is called.

Another method of making whitewash, which is strongly recommended, is to take a suitable cask, clean and water-tight, and put into it half a bushel of lime. Slake it by pouring over it boiling hot water, and in sufficient quantity to cover the lime to the depth of five inches, and then stir the whole briskly until the lime is thoroughly slaked. Then add two pounds of sulphate of zinc dissolved in water, and one of common salt. These ingredients will cause the wash to harden and prevent it from cracking, which gives an unsightly appearance to the work.

Whitewash is very good for the ceilings of basements, and all dark places, because it reflects the light, and by lighting up the room imparts more cheerfulness to its aspect, and renders it the more fit as a habitation. For ceilings of lofty well-lighted rooms, however, plain whitewash is too bright and dazzling, and it has been found advisable to subdue its brilliancy by the addition of a slight quantity of colouring matter, or to relieve the broad unvaried expanse of white by lines of colour in the cornice, and by a stencilled pattern in some light and pretty tint that is repeated in the paper, or which forms the ground-work of the walls. For example, a white or very pale blue ground, with a stencilled pattern in darker shades of blue, looks cool, chaste, and pretty ; while in a room lighted from the north, or some other equally cold and dark quarter, a warm grey, enlivened with stencilling in crimson or Indian red, will look very well. The old fashion of stencilling walls, it is to be hoped, will yet more and more supersede wall-papers.

Whitewash to cover 100 yards superficial once over, 12lb. of whiting will be wanted, with $\frac{1}{2}$ lb. of blue-black and 1 $\frac{1}{2}$ gallons of size. To go twice over the same superficial extent :

21lb. of whiting, $\frac{3}{4}$ lb. of blue-black, and 2 $\frac{1}{2}$ gallons of size will be required

Any required tint can be given to whitewash by the addition of a little colouring matter. Thus a beautiful *cream colour* may be produced by the admixture of yellow-ochre, or a good *pearl* or *blue-grey* tint may be obtained by the addition of a little lamp black or ivory black.

A good *fawn colour* is made by adding four parts of umber, one part of Indian red, and one part of lamp-black to the whitewash. A *stone colour* is made by adding yellow-ochre with a very small quantity of blue-black, and the cream colour above mentioned may be deepened to *straw colour* or *buff* by using more yellow-ochre. *Warm tints* may be imparted to whitewash by adding a little blue-black, or indigo, or orange red, or Venetian red. Any shade of pink or salmon colour may be made by vermilion ; cobalt will give a *blue* or *French grey* according to the quantity that is used, and *green* may be produced by mingling indigo and yellow-ochre, more of the former being used when a *blue green* or *dark green* is wanted, and more of the latter when lighter tints of green are desired. Sulphate of iron will also give a warm tint to whitewash. For interior walls the use of colour is desirable, but for the outside walls nothing more should be done than give the wash a warm tint by the admixture of some of the colouring substances mentioned above. A *yellow* or *grey* wall for the exterior of a building is not nearly so pleasing to the eye as plain whitewash, or whitewash sufficiently tinted as to take off the extreme brilliancy that accompanies a pure white surface ; nor does it afford so good a back-ground for trees, shrubs, creepers, and climbers.

It must be remembered that the greater the quantity of whitewash the more will be the colouring matter required, and the amateur must also recollect that the colour will look far darker when wet in the pail than when dry on the wall. To decide on the precise tint to be used, and to bring the wash exactly to the colour required, whether light or dark, it will be

necessary to spread a little with a brush over a piece of white paper and allow it to dry, when the colour of the wash will be shown as it will dry on the wall. If too dark, whitewash must be added by degrees to bring down the original preparation until the desired tint is obtained; and if too light more colouring matter must be added, sparingly and by degrees, until a satisfactory result is produced.

Lastly, it is necessary to repeat that care is needful, not only in cleaning a wall or ceiling for the reception of colour, but in mixing the colouring solution itself and applying it. The whitewash itself should be carefully mixed, the preparation being carefully stirred together with a smooth stick or a wooden spoon of large size, until the water and whitening are thoroughly incorporated; and then the size should also have its share of stirring, and the colouring matter the same, so that no lumps may remain at the bottom of the vessel unmixed—an oversight which will tend to make the last part of the mixture somewhat darker in shade than that first used from the same pail. It is necessary, too, to stir

up the wash, whether white or coloured, every now and then while using it, as the heavier particles held in solution have always a tendency to sink to the bottom and settle there.

There is moreover a method to be observed even in the mode of applying the wash. Not too much should be taken up at one time with the brush, as when the brush is overcharged splashing is the inevitable result. The strokes of the brush should all be backwards and forwards in one direction, as the lines traced by the hairs of the brush will generally show in which direction it has been moved. Ceilings should be brushed the long way of the room, and walls straight up and down.

Lest there be any doubt as to where colouring matter for coloured washes may be obtained, it may be as well to say that pigments can be purchased in powder of any oil and colourman, ready for use. To prevent the presence of lumps, it is as well to pulverise every bit of the colouring matter to be used before adding it to the whitewash, and as an additional safeguard to strain the mixture through a coarse cloth.

TIME ON SHIPBOARD

On the sea, time is divided into periods called Bells. The first bell is 12.30 a.m.; 2 bells, 1 o'clock; 3 bells, 1.30 p.m.; 4 bells, 2 p.m.; 5 bells, 2.30 p.m.; 6 bells, 3 p.m.; 7 bells, 3.30 p.m., and 8 bells, 4 a.m. It will be observed, therefore, that the time between bells is a half-hour, and that the highest number of bells is eight. The four hours covered by the eight bells are repeated six times in twenty-four hours. The first bell in the second period coming at 4.30 a.m.; the next period, 8.30 p.m.; the next period at 12.30 p.m.; the next period at 4.30 a.m., and the last period at 8.30 a.m. The crew is mustered in two divisions, "the starboard

watch" and "the port watch." The day commences at noon. The afternoon watch continues from noon to 4 p.m.; the first dog watch from 4 p.m. to 6 p.m.; second dog watch from 6 p.m. to 8 p.m. First watch from 8 p.m. to midnight; middle watch from 12 to 4 a.m.; morning watch, 4 to 8 a.m.; forenoon watch, 8 a.m. to noon. There are, therefore, seven watches, which the crew keep alternately. The watch which goes on duty at noon one day has the afternoon next day, and the men who have only four hours off duty one night have eight hours the next.

ASTRONOMY

ASTRONOMY is the science that treats of the heavenly bodies; the sun, moon, planets and stars. For many years it was thought that the earth was an extensive plain, and that the apparent movements of the sun and stars was a real one around the earth. More than 2,500 years ago a learned Greek named Pythagoras taught otherwise, but he was not believed. About nineteen hundred years later, Copernicus revived the theory we now know to be correct, namely, that the earth is a globe that daily revolves on its own axis, and travels round the sun once in a year. These two motions account for the phenomena of day and night, and the seasons. The earth turns from west to east, and so the sun and stars *appear* to travel from east to west. The annual journey of the earth round the sun brings about our changes of season, because the earth is inclined on its axis; consequently in our journey round the sun, that part of our inclined surface nearest the sun at one time of the year, is farthest away from it six months later, when we reach the opposite side of our orbit.

The moon—our own familiar attendant—derives her brilliance entirely from the light of the sun, and completes her path round the earth in a period of nearly 28 days. Its diameter is about 2,160 miles, and its average distance from us 240,000 miles.

Observation showed alterations in the relative positions of several celestial bodies, and these were found to be

globes which, like the earth, are revolving round the sun. These were called *planets*. The stars are apparently fixed bodies, and possibly the centres of systems comparable to our own.

The following table gives the diameters of the planets and their distances from the sun. All the planets except the two nearest to the sun are accompanied by one or more moons. Saturn, besides his moons, also shows three remarkable rings parallel with his equator, and presents a beautiful appearance when seen through a telescope; but whether these rings are a mass of tiny satellites or not is a matter of conjecture.

Name of Planet.	Approximate Distance from Sun.	Approximate Diameter.	No. of Moons.
	Miles.	Miles.	
Mercury .	35,000,000	3,058	—
Venus .	66,000,000	7,510	—
Earth .	92,000,000	7,926	1
Mars .	139,000,000	4,363	2
Jupiter .	475,000,000	84,846	7
Saturn .	871,000,000	70,136	8
Uranus .	1,753,000,000	33,274	6
Neptune .	2,745,000,000	37,276	1

In addition to the above there are the planetoids or minor planets, which are between Mars and Jupiter as regards distance from the sun. Of these minor planets, nearly 500 have been discovered, but their combined mass cannot, it is conjectured, exceed one-fourth of the earth's mass.

The planets and their moons shine by reflecting the light of the sun ; the stars shine by reason of their own light as does the sun ; indeed the sun is the nearest star, and from the next nearest would appear only as a brilliant point. The sun and his family of worlds is called the *Solar System*, and the *Copernican System* in honour of Copernicus who first demonstrated it.

It was soon ascertained that the stars were immensely distant from our planetary domain ; the nearest of them all—a *Centauri*—being more than 19,000,000,000,000 miles away. These distances are computed by an interesting method called *Parallax*, which, however, cannot be fully explained in this short article, though an idea of it can be given. To a traveller in a train, objects that are near appear to pass by much more quickly than objects at a distance. The planets, which are so much nearer than the stars, appear in different positions when viewed from different parts of the earth, say from Greenwich and from the Cape of Good Hope. The apparent difference of position is noted, the angle ascertained, and therefrom the distance is determined. There are other methods of measuring the distance of the planets, but when the *Solar Parallax* method is applied to the stars it fails utterly, for no angle is observable. Astronomers therefore reckon from two places in the earth's orbit instead of two places on the earth's surface. Each six months the earth is on opposite sides of the sun, e.g. in March it is 180 million miles distant from its position in September. A visual line to the nearest star from one position in March is found to vary from a visual line in September by less than one second of an arc that is, less than a 3,600th of a degree, and the two lines are almost parallel, even with so great a base. A calculation in trigonometry with that small angle gives the distance as nearly 20 billion of miles.

Although the keenest eyesight cannot see more than 4,000 stars, the telescope shows that there are probably hundreds of millions, mostly

situated billions of miles from their nearest neighbour. All of them are seemingly swiftly travelling in various directions, yet because of their immense distances, the face of the sky remains practically the same. Photographic charts of the whole heavens have lately been completed, and future observers may be able to determine whither the driftings tend.

The shepherd astronomers, thousands of years ago, fancying the stars here and there resembled some hero or animal, divided them into groups, called *Constellations*. The names applied are still used, and we conveniently find any star we want, by its chart name, thus *Arcturus* is named a *Bootes*, it being the principal star in the group ; *Vega* is called a *Lyra*, and the next brightest in the same constellation is called β *Lyra*, because it is less brilliant than *Vega*, and so on.

The Great Bear, whose seven brightest stars are visible every clear night in our hemisphere is called *Ursa Major*, and the Little Bear *Ursa Minor*. The star at the tip of the Little Bear's tail is our Pole Star ; it is named *Polaris*, or a *Ursa Minoris*. It is almost immediately overhead at the North Pole of the earth. Its appearance is very useful to seamen and landsmen alike, because from it they can determine their position on sea or land. When they observe any known star to be overhead, and calculate that star's angular distance from the Pole Star, they ascertain their terrestrial distance south of the earth's pole.

The following easy method will enable anyone to find the Pole Star :—Observe how a straight line from the two outer stars in the Great Bear are extended, leads directly to the end star in the Little Bear. Trace this line on the sky, and the Pole Star can never afterwards be forgotten.

Cassiopeia can easily be found ; the constellation is near the Bear, and has five bright stars assuming the form of an irregular "W." "*Cygnus*," (The Swan) has five bright stars in the form of a cross, just to the right of *Vega*, the principal star in the *Lyra*.

The stars are referred to as the *Stellar System*.

All that is known of the science of astronomy is due to the arduous toil of many great men, chief amongst whom are Copernicus, who made known the system of sun and planets; Kepler, who arrived at the laws that control the movements of the several bodies) the basis of which Newton subsequently made the starting-point of his great discovery); Galileo, for the telescope and the use he put it to; Halley, for showing how our distance from the sun may be found; Herschel, for the discovery that many stars revolve round one another in pairs, and for his researches into the mysteries of the Milky Way.

Perhaps the greatest debt of all is due to Newton, who established the fact of *universal gravitation*, proving that every particle of matter has an attraction on every other particle, and that the influence of any ponderable body, is exactly in proportion to its *mass* and inversely according to *distance*. This absolute law holds the moon in her course round the earth; and the earth true to the sun in her journey around him. The same law makes the loosened apple fall, and keeps our feet, and those of our brethren at the other side of the world, pressing directly towards the earth's centre; the planets in their courses are controlled by the same beneficent force.

The Tides of our oceans which rise and fall so regularly, do so in obedience to the attraction of the moon. It is also asserted that the solid land has also two tides daily due to the same cause.

Eclipses of the sun and moon are of fairly frequent occurrence, and are the effect created by (1) the moon passing directly between ourselves and the sun, and (2) by the earth passing between the sun and the moon. About five lunations in six, the moon is not directly in line, and is too high or too low to suffer eclipse, and at times it is only partially eclipsed. Eclipses

of the sun are often partial, but if the earth, the moon, and the sun are exactly in line, we may have either a *total* or an *annular* eclipse of the sun. When the earth is at her farthest distance from the sun, or the moon is at her nearest to us, a total eclipse will ensue, for the obvious reason that the sun then presents a smaller apparent diameter, or the moon appears larger. On the other hand, when we are nearer than usual to the sun or the moon at her maximum distance from us, there will be an annular eclipse, a ring of light showing round the dark body of our satellite.

The moons of the planets also suffer eclipse, and at times obscure the sun's light from some portion of the surface of the planet around which they revolve.

Quite a small telescope will enable an observer to view eclipses of Jupiter's moons, they disappear and reappear at intervals which have been carefully computed. Tables are published enabling the observer to note the exact time of these occurrences.

Comets are strange bodies that visit us from space, some periodically, some once only. Many are very small, but occasionally a comet with an immense luminous tail covering a large expanse of sky will appear. Once a source of wonder and dread, they are now known to be of very evanescent constituents. Halley's Comet, so named after the calculator of its period, visits us about every seventy-six years, and aroused great interest in 1910. It will not again be seen until 1986.

The Milky Way, a band of light which engirdles our sphere like a giant circle, owes its luminosity to innumerable stars at an infinite distance from us. Sir William Herschel made this band his especial study, and came to the conclusion that our solar system is situated nearly central within it, and that we, with the sun, are swiftly journeying towards the Constellation "Hercules."

CARVING

When carving a slice of meat, after the first incision has been made, the angle at which the knife is held must never be altered, or a jagged slice will be obtained. When the way to control the knife has been mastered, the keystone to successful carving has been acquired.

The cut should be direct, sharp, and incisive. A saw-like action should never enter into the operation.

Generally speaking, the knife should be held firmly, but it cuts best when applied lightly, and less gravity is squeezed from the meat when the pressure is slight. By using the point of the knife lightly as a wedge, and the fork as a lever, even a big turkey or goose may be easily jointed, provided the carver is aware exactly how the joint is situated and held together. Every assistance should be given the carver by providing him with a thin sharp-bladed knife of suitable size, and by serving whatever is to be carved on a dish large enough to allow the joint or bird to be turned to the most convenient position for the purpose. The dish should also afford space for carved portions, for an expert carver will, with a few strokes of the knife, disjoint a bird, and usually prefers to do so before beginning to serve any part of it. Carving is always more easily and pleasantly performed when the dish contains neither gravy nor garnish.

A steel knife and fork should never be used for fish, because contact with this metal is apt to spoil its flavour, particularly with certain choice varieties which owe their excellence almost entirely to a delicate characteristic flavour that may be easily destroyed

or overpowered. A silver or plated slice and fork should be provided for carving and serving it. When serving fish be careful not to break the flakes, which ought to be served as entire as possible, though short grained fish, such as salmon, should be cut lengthwise.

The carving of loins and necks of either veal, mutton, or lamb must in some measure be determined by the size of the joints, but if the butcher has separated the chine bone into narrow divisions, the carver should have no difficulty in cutting suitable portions. He can then cut between the bones, and each bone with meat attached should be of a convenient size for serving.

Some joints, such as the undercut of a sirloin of beef, or the knuckle end of a leg of mutton are best when eaten hot; others are equally good either hot or cold, but sometimes by using only one particular part the joint may present a better appearance when served cold. Thus, if the under side of either a shoulder or leg of mutton is cut without encroaching on the upper surface, when the joint is turned over it will have almost the appearance of an uncut one. Moreover, multiplied cut surfaces provide means of escape for the juices of the meat, and as a natural consequence leave a dry and flavourless cold joint. Meat should always be cut across the grain, the one exception to the rule being the saddle of mutton, which is nearly always carved at right angles to the rib bones, in slices running parallel with the fibres of grain of the meat. When the joint or bird is stuffed, a little of the forcemeat should be served with

No. 1.



No. 2.





each portion, and the same rule applies to the watercress used to garnish birds and the toast upon which many small birds are dished. The gravy may be poured over brown meats, but it should always be put at the side of chicken, veal, and white meats.

Ham and beef should be carved into very thin slices, and mutton and pork into fairly thick ones. Joints that have to be carved should be served on dishes without any gravy or dressing.

FISH

Cod.—Cut in fairly thick slices through to the centre bone and detach just above it.

Note.—Of this fish, the parts about the backbone and shoulders are the firmest, and most esteemed. The sound, which lines the fish beneath the backbone, is considered a delicacy, as are also the gelatinous parts about the head and neck.

Crab, to Dress.—Lay the crab upon its back, and insert the fingers between the shell and the fish. Using the thumbs as levers, push the body away from the shell (Fig. 1). Break off the claws, remove the poisonous "fingers," from the body of the fish, cut away the sides of the "back" shell, and dress the crab in this part, without disturbing the contents. The "fingers" usually adhere to the belly of the crab. When cutting away the sides of the shell, run the knife along the joint line, which is easily discernible. To demonstrate this, the picture only shows one side cut away (Fig. 2). (Carving Illustration No. 1.)

Eel and all Flat Fish.—The thick part of the eel is reckoned the best; and this holds good of all flat fish.

Lobster, to Dress.—Insert the knife at the centre of the back, and cut through towards the tail (Fig. 1). Then turn the lobster round and cut through towards the nose (Fig. 2). If this end is cut first the shell invariably breaks. Now remove the "brains" (Fig. 3). These are usually of a greenish colour and are found on either side of the lobster. Crack the claws with a hammer and arrange the fish on a dish, garnishing with fresh

parsley. The tail of the lobster is the prime part and next to that the claws. (Carving Illustration No. 2.)

Mackerel.—First cut along the backbone of the fish. Then insert the fish-knife at this part and cut through, separating the upper half of the fish, which may be divided; when the fish is of moderate size serve for two helpings only. Next remove the backbone, tail and head, and divide the lower half in the same way.

Salmon.—First run the knife down the centre of the back and along the whole length of the fish. Then cut downwards from the backbone to the middle of the fish, cut through the centre and remove the piece from the back. Next cut the lower part of the fish in the same manner.

A slice of the thick part should always be accompanied by a smaller piece of the thin from the belly, where lies the fat of the fish.

Note.—Many persons, in carving salmon, make the mistake of slicing the thick part of this fish in the direction opposite to that we have shown, and thus, by the breaking of the flakes, the beauty of its appearance is destroyed.

Sole, Baked or Fried.—The usual way of helping this fish is to cut it quite through, bone and all, distributing it in nice and not too large pieces. The guests should be asked which part they prefer. The middle part is generally thought better than either head or tail. The head should be cut off, not laid on a guest's plate.

In helping filleted soles, one fillet is given to each person.

Plaice.—First run the knife down the centre of the fish. Then cut downwards (only through to the bone) and remove portions in the manner shown in the illustration. Next take away the backbone and head of the fish, and treat the lower half in the same way. (Carving Illustration No. 3, Fig. 3.)

Turbot.—First run the fish-knife down the thickest part of the fish, quite through to the bone, and then cut slices towards the sides of the fish. When the carver has removed all the meat from the upper side of the fish, the backbone should be raised, and the under side helped as the upper.

Note.—The thick parts of the middle of the back are the best slices in a turbot; and the rich gelatinous skin covering the fish, as well as a little of the thick part of the fins, are dainty morsels, and small portions should be placed on each plate.

Brill and John Dory.—These are carved in the same manner as a turbot. Of the latter the head is the best part.

Whiting, Haddock, etc.—Whiting, pike, haddock and similar fish, when of sufficiently large size, may be carved in slices from each side of the backbone in the same manner as salmon; each fish serving for four or more slices. When small, they may be cut through, bone and all, and helped in nice pieces. A small whiting is served whole; a middle-sized fish in two pieces.

BEEF

Atchbone of Beef.—A boiled atchbone of beef is a very simple joint to carve; a thick slice should be first cut off the "slant" and then thin slices.

Brisket of Beef.—But little description is necessary to show how a boiled brisket of beef is carved. The point to be observed is that the joint should be cut evenly and firmly quite across the bones, in slices the whole width of the joint, so that on its re-appearance at table it should not have a jagged and untidy look.

Beef Tongue.—Cut nearly through across the tongue at the thick part and then serve a fairly thick slice. The carving may be continued in this way towards the point until the best portions of the upper side are served. The fat which lies about the roof of the tongue can be served by turning it over.

Ribs of Beef.—This dish resembles the sirloin, except that it has no fillet or undercut. The mode of carving is similar to that of the upper cut of the sirloin, viz., cut in slices off the sides, starting at the thick end and through to the other. This joint will be the more easily cut if before commencing to carve it into slices the knife is inserted immediately between the bone and the meat.

Sirloin of Beef.—This dish is served

differently at various tables, some preferring it to come to table with the fillet, or, as it is usually called, the undercut, uppermost. The reverse way is that most usually adopted. Still the undercut is one of the prime parts of beef and is best eaten when hot; consequently, the carver himself may raise the joint, and cut some fairly thick slices out of (across) the under side. The upper part of the sirloin should be cut as shown in Carving Illustration No. 5, and care should be taken to carve it evenly and in thin slices. In carving this joint, the knife should be first inserted just above the bone at the bottom, and run sharply along between the bone and meat, and also to divide the meat from the bone in the same way at the side of the joint. The slices will then come away more readily.

Round of Beef.—A round of beef, or ribs rolled, are not so easily carved as some joints, and to manage properly, a thin-bladed and very sharp knife is necessary. Off the outside of the joint at its top, a thick slice should first be cut, so as to leave the surface smooth then thin and even slices can be carved.

VEAL

Breast of Veal.—The breast of veal consists of two parts—the rib-bones and the gristly brisket. These two parts should first be separated by sharply passing the knife through the centre of the joint; when they are entirely divided, the rib-bones should each be detached separately and served. The brisket can be helped by cutting pieces from the centre part of the joint. The carver should ask the guests whether they have a preference for the brisket or ribs.

Fillet of Veal.—The carving of this joint is similar to that of a round of beef. Slices, not too thick, are cut; and the only point to be careful about is, that the veal be *evenly* carved. Between the flap and the meat the stuffing is inserted, and a small portion of this should be served to every guest. The persons whom the host wishes most to honour should be asked if they like the brown outside slice, as this, by many, is exceedingly relished.

Knuckle of Veal.—This is carved in the same manner as leg of mutton. The best slices are those from the thickest part of the knuckle.

Loin of Veal.—As is the case with a loin of mutton, the careful jointing of a loin of veal is more than half the battle in carving it. The butcher should be warned to carefully attend to this, for there is nothing more annoying or irritating to an inexperienced carver than to be obliged to turn his knife in all directions to find the exact place where it should be inserted in order to divide the bones. When jointing is properly performed, there is little difficulty in carrying the knife across and separating each chop. To each guest should be given a piece of the kidney and kidney-fat, which lie underneath, and are considered great delicacies.

• Calf's Head.—A calf's head is nearly always boned before serving, and is then cut into slices like any other boned and rolled joint, but when the bones have not been removed, cut strips from the ear to the nose; with each of these should be helped a piece of what is called the throat sweetbread, cut in semi-circular form from the throat part. The eye, and the flesh round, are favourite morsels with many, and should be given to those at the table who are known to be the greatest connoisseurs. The jawbone being removed, there will then be found some nice lean; and the palate, which is reckoned by some a tit-bit, lies under the head. On a separate dish there is always served the tongue and brains, and each guest should be asked to take some of these.

MUTTON AND LAMB

Forequarter of Lamb.—In carving a forequarter of lamb, the separation of the shoulder from the breast is the first point to be attended to; cut in the manner shown in Carving Illustration, No. 4. and then, by raising with a little force the shoulder, into which the fork should be firmly fixed, it will come away with just a little more exercise of the knife. In dividing the shoulder and breast the carver should take care not to cut away too much of the meat from the latter, as that would rather spoil its appearance when the shoulder is

removed. Unless the whole of the quarter is to be cut up, the shoulder should be transferred to another dish and put aside to be served cold. The joint is then ready to be served to the guests; cutlets are carved from the ribs in the manner shown in Fig. 3, and the shoulder is carved in the usual manner. When the shoulder is being used, the carver may ask those at the table which parts they prefer, ribs, brisket, or a piece of shoulder, or he may serve a piece of shoulder and a cutlet in each portion.

Leg of Mutton.—This joint is almost invariably carved in the manner shown in the engraving. The carving of it is not very difficult; the knife should be carried sharply down, and slices taken from either side, as the guests may desire, some liking the knuckle-end as well done, and others preferring the more underdone part. The fat should be sought near the bottom corner of the thick end. (Carving Illustration No 6, Fig. 1.)

Loin of Mutton.—There is one point in connexion with carving a loin of mutton which is necessary with all other similar joints; that is, that it should be thoroughly well jointed by the butcher. The knife should be inserted in the thick side of the joint, and after feeling a way between the bones, it should be carried sharply through, separating each chop in the same manner. As there are some people who prefer the outside cut, while others do not like it, they should be questioned as to their choice.

Saddle of Mutton.—In order of excellence the saddle of mutton may be said to rank first. It consists of two loins connected by the spinal bone. The method adopted in carving this joint is, contrary to the general rule of cutting meat, across the grain; in this case, the meat is carved across the ribs, in slices running parallel with the backbone and the fibres or grain of the meat. Each long slice should be cut across into two or three pieces, according to its length; and with each portion is usually served a small piece of fat cut from the bottom of the ribs where the joint rests on the dish, and some good gravy.

Shoulder of Mutton.—The joint

should be raised from the dish and as many slices cut away as can be taken in the manner shown in Carving Illustration No 6; afterwards the meat lying on either side of the bladebone should be served, by carving from the knuckle end. The uppermost side of the shoulder being now finished, the joint should be turned, and slices taken off along its whole length. There are some who prefer the underside of the shoulder for its juicy flesh, although the grain of the meat is not so fine as that on the other side, and this is served in the manner shown.

PORK

Suckling-Pig.—A sucking-pig is usually sent to table split in half and the head separated from the body. The first point to be attended to is to separate the shoulder from the carcase, which is done in the same way that the shoulder of a forequarter of lamb is separated. The next step is to take off the leg; and this is done in the same way. The ribs then stand fairly open to the knife, and two or three helpings will dispose of these. The other half of the pig is served, of course, in the same manner. Different parts of the pig are variously esteemed; some preferring the flesh of the neck; others the ribs, and others, again, the shoulders. The truth is, the whole of a sucking-pig is delicious, delicate eating; but, in carving it, the host should consult the various tastes and fancies of his guests, keeping the larger joints generally for the gentlemen of the party.

Ham.—In cutting a ham, the carver must be guided according as he desires to practise economy, or have, at once, fine slices out of the prime part. Under the first supposition, he will commence at the knuckle end, and cut off thin slices towards the thick part of the ham, slanting the knife from the thick part to the knuckle. To reach the choicer portion, the knife, which must be very sharp and thin, should be carried quite down to the bone, at the centre of the ham, which is then carved in thin slices towards the thick end. A ham, either hot or cold, is sent to table with a paper ruffle round the knuckle.

Leg of Pork.—This joint, which is such a favourite one with many people, is easy to carve. The knife should be carried sharply down to the bone, clean through the crackling, in exactly the same manner as that described for leg of mutton. Sage and onion and apple sauce are usually sent to table with this dish—sometimes the leg of pork is stuffed—and the guests should be asked if they will have either or both.

Loin of Pork.—As with a loin of mutton, it is essential a loin of pork should be properly jointed before cooking, and the crackling must be scored. These joints being attended to, there is no difficulty in carving the joint, which is divided into neat and even chops.

Note.—The other dishes of pork do not call for any special remarks as to their carving or helping.

POULTRY

No dishes require so much knowledge and skill in carving as game and poultry, for it is necessary to be well acquainted with the anatomy of the bird and animal in order to place the knife at exactly the proper point.

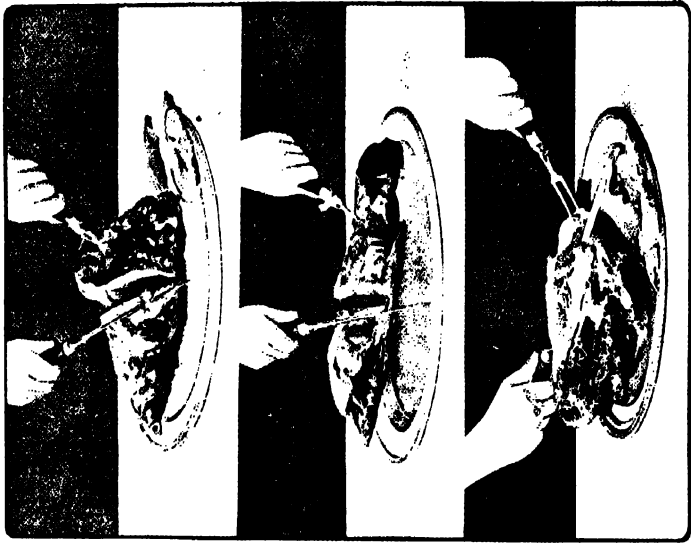
Roast Duck.—A young duck or duckling is carved in the same manner as a chicken. First remove the wings, then the breast should be cut off the bone in one slice, or several slices if very plump. The legs are next removed and divided at the joints; and unless a contrary request has been made by the person for whom the portion is intended, the foot and the bone to which it is attached, should be cut off before serving. When stuffing has been introduced, the skin should be cut across and the farce scooped out with a spoon. As to the prime parts of a duck, "the wings of a flyer and the legs of a swimmer" are generally considered the best portions.

Boiled Fowl.—Though the legs of a boiled fowl are hidden beneath the skin, the method of carving is not affected, and the following directions may be applied to birds either roasted or boiled. The fork should be inserted firmly in the breast of the bird, and with a sharp knife a downward cut

No. 5.

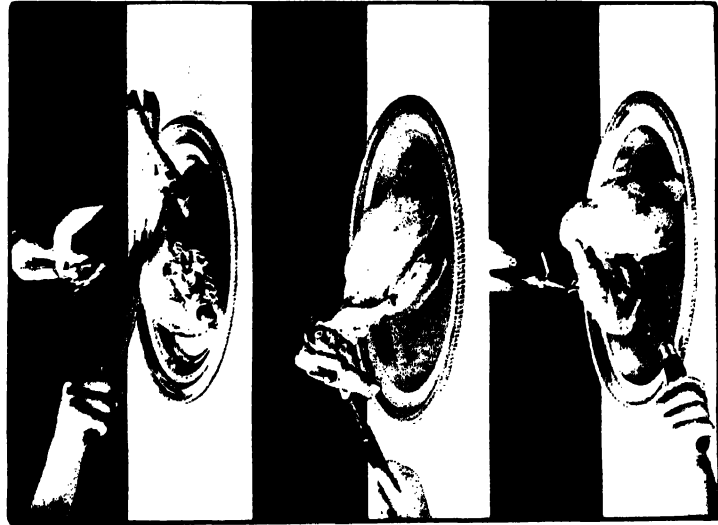


No. 6

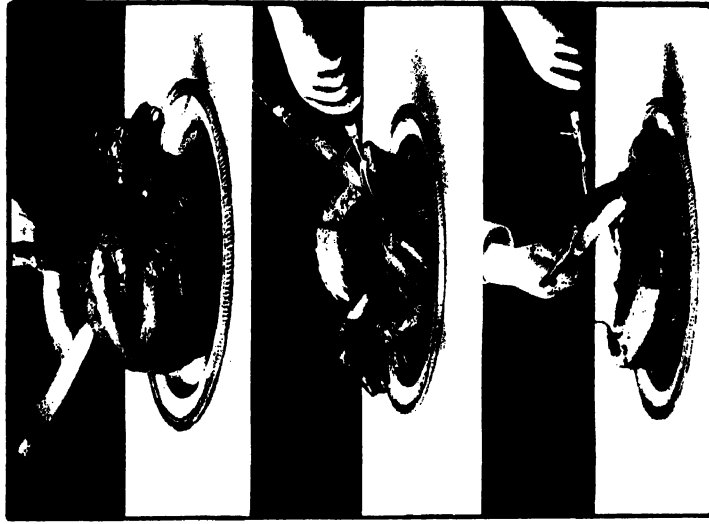


CARVING.

№. 7.



№. 8



CARVING

made between the thigh and the body, after which an outward turn of the blade of the knife usually detaches the leg sufficiently to allow the joint connecting it to the body to be easily severed. With the fork still inserted in the breast, the next step should be to remove the wings. In doing this a good carver will contrive by cutting widely, but not deeply, over the adjacent part of the breast, to give to the wing the desired shape without depriving the breast of much of its flesh. When carving a large fowl the breast may be sliced, otherwise it should be separated from the back by cutting through the rib-bones, the only difficulty in carving this part being the small hinge-bones near the neck. The breast should be cut across in half, thus providing two portions, to which may be added, when a larger helping is desired, a slice off the thigh. Cut lengthwise into rather thin slices, the legs may be satisfactorily disposed of even when those to be served consist of persons to whom a whole leg could not be offered. To conclude the carving the back should be turned over with the cut side to the dish, and if the knife be pressed firmly across the centre of it, and the neck raised at the same time with the fork, the back is easily dislocated about the middle. To remove the sockets of the thigh-joints (the side-bones to which is attached choice morsels of dark-coloured flesh) the tail part of the back must be stood on end, and held firmly by means of the fork, while the bones are cut off on either side. The more highly esteemed parts of a fowl are the breast, wings and merrythought; the thigh may be served to a gentleman, but the drum sticks should be put aside, and used afterwards in some way that necessitates the flesh being minced.

A fowl, when boned and stuffed, is usually cut across in slices.

Roast Fowl.—Fowls, when roasted, are carved in exactly the same manner as when boiled, therefore the foregoing directions render it unnecessary to describe the operation again. When the liver and gizzard have been trussed and cooked with the fowl, the wing to which the liver is attached may be regarded as the choice

portion of the bird, and should be offered to the person entitled to the most consideration in this respect. When the fowl is stuffed, a little forcemeat should be served with each portion, but when convenient, it is better to hand the gravy and bread sauce separately.

Roast Goose.—The breast of a goose is the part most esteemed, therefore when the bird is larger than is necessary to meet the requirements of one meal, it frequently happens that the carving is confined solely to the breast. The carver should, however, consult the tastes of those he is serving with reference to choice of parts, for the leg is sometimes preferred. A large number of slices may be cut off the breast, and as the wing is the part least esteemed, the flesh of the upper part of it may with advantage be included in the slices cut from the breast. When onion farce has been employed it is advisable to ascertain if it be agreeable to the taste of the person for whom the portion of goose is intended, for so many dislike the farce itself, although they may like the flavour imparted to the bird by its use. The directions given for carving a boiled fowl may be applied here, although greater force will most probably be required in detaching the various parts. When the goose is stuffed with onion farce it is nearly always accompanied by apple sauce and gravy, both of which should, when convenient, be handed separately.

Roast Turkey.—A small turkey may be carved in the same manner as a large fowl (see directions for carving the same); and no bird is more easily carved than a large turkey, for the breast alone may, when properly carved, be made to serve a large number of persons. If more meat is required than the breast provides, the upper part of the wing should be served. When it is necessary for the legs to be carved, they should be severed from the body and then cut into slices. The forcemeat in the crop of the bird should be carved across in thin slices; and when the body is stuffed, the apron should be cut across.

A boiled turkey is carved in the same manner as when roasted.

Pigeon.—A very straightforward

plan is adopted in carving a pigeon ; the knife is carried entirely through the centre of the bird, cutting it into two precisely equal and similar parts. If it is necessary to make three pieces of it, a small wing should be cut off with the leg on either side, thus serving two guests ; and, by this means, there will be sufficient meat left on the breast to send to the third guest.

Rabbits.—In carving a boiled rabbit, the knife should be drawn on each side of the backbone, the whole length of the rabbit, thus separating the rabbit into three parts. Now divide the back into two equal parts, then let the leg be taken off, and next the shoulder. This, is an easy way to carve a rabbit, although there are other modes equally practical.

A roast rabbit is rather differently trussed from one that is meant to be boiled ; but the carving is nearly similar. The back should be divided into as many pieces as it will give, and the legs and shoulders can then be disengaged in the same manner as those of the boiled animal.

GAME.

Roast Hare.—Place the hare on the dish with the head at the left hand. Make an incision, and cut along the spinal bone from about the centre of

the back to the end. Then cut through the side and middle, and remove the portion shown in Carving Illustration No. 8, Fig. 1. The part it is removed from is more clearly seen in Fig. 2. Then cut off the hind leg in the manner shown in Fig. 2, and afterwards the foreleg or wing, as Fig. 3. It is the usual plan not to serve any bone in helping hare ; and thus the flesh should be sliced from the legs and placed alone on the plate. In large establishments, and where men cooks are kept, it is often the case that the backbone of the hare, especially in old animals, is taken out, and then the process of carving is, of course, considerably facilitated. A great point to be remembered in connexion with carving hare is, that plenty of gravy should accompany each helping ; otherwise this dish, which is naturally dry, will lose half its flavour, and so become a failure. Stuffing is also served with it ; and the ears, which should be nicely crisp, and the brains of the hare, are esteemed as delicacies by many.

Pheasant.—The choice parts of a pheasant are the breast and wings. The various members of the bird are severed from the body in exactly the same manner as those of a roast or boiled fowl, and to avoid repetition the reader is referred to those directions.

CONTRACTIONS AND ABBREVIATIONS

A.B., Able-bodied Seaman.
A/c., acct., Account.
A.D., *Anno Domini*, Year of the Lord.
A.D.C., Aide-de-Camp.
Adj., Adjutant.
Ad. Lib., *Ad Libitum*, At pleasure.
Ads., Advts., Advertisements.
A.K.C., Associate of Kings' College.
A.L.S., Associate of the Linnean Society.
A.M., *Anno Mundi*, Year of the World ;
Ante Meridian, Before Noon.
Amt., Amount.
Anon., Anonymous.
A.O.F., Ancient Order of Foresters.

A.R., *Anna Regina*, Queen Anne ;
Anno Regni, In the year of the reign.
A.R.A., Associate of the Royal Academy.
A.R.S.A., Associate of the Royal Scottish Academy ; Associate of the Royal Society of Arts.
A.R.S.M., Associate of the Royal School of Mines.
A.S., Academy of Science.
B.A., Bachelor of Arts.
B. & F.B.S., British and Foreign Bible Society.
B.C., Before Christ.

- B.D., Bachelor of Divinity.
 B.L., Bachelor of Law.
 B.Sc., Bachelor of Science.
 B.S.L., Botanical Society, London.
 C.A., Chartered Accountant.
 C.B., Companion of the (Order of the) Bath.
 C.C., County Councillor.
 C.D.S.O., Companion of the Distinguished Service Order.
 C.E., Civil Engineer.
 Cent., Centum, One Hundred.
 Ch.M., Master of Surgery.
 C.I.E., Companion of (the Order of) the Indian Empire.
 C.M., *Caius Marius*, Certificated Master.
 C.M.G., Companion of (the Order of) Saints Michael and George.
 C.M.S., Church Missionary Society.
 C.O.D., Cash on Delivery.
 Col., Colonel; Colonial, or Colony.
 C.O.S., Charity Organization Society.
 C.P.S., *Custos Privati Sigilli*, Keeper of the Privy Seal.
 C.R., *Custos Rotulorum*, Keeper of the Rolls.
 Cr., Creditor or Credit.
 C.S., Civil Service; Clerk to the Signet.
 C.S.I., Companion of (the Order of) the Star of India.
 C.T., Certificated Teacher.
 Cwt., *Centum-weight*, Hundredweight.
 D.C.L., Doctor of Civil Law.
 D.D., Doctor of Divinity.
 D.F., Dean of the Faculty.
 D.G., *Dei Gratia*, by the Grace of God.
 D.L., Deputy Lieutenant.
 D.L.O., Dead Letter Office.
 Dr., Debtor; Doctor.
 D.Sc., Doctor of Science.
 D.S.O., Distinguished Service Order.
 D.V., *Deo volente*, God willing.
 Dwt., *Denarius-weight*, Pennyweight.
 E. & O.E., Errors and Omissions Excepted.
 Ed., Edition; Editor.
 e.g., *Exempla gratia*, for example.
 Esq., Esquire.
 Et al., *et alibi*, and elsewhere.
 Etc., &c., *Et cetera*, and other things.
 Et seq., and the following.
 F.A.S., Fellow of the Antiquarian Society; Fellow of the Society of Arts.
 F.C.A., Fellow of the Institute of Chartered Accountants.
 F.C.P., Fellow of the College of Preceptors.
 F.C.S., Fellow of the Chemical Society.
 F.D., *Fidei Defensor*, Defender of the Faith.
 F.G.S., Fellow of the Geographical Society, or Geological Society.
 F.H.S., Fellow of the Horticultural Society.
 F.I.A., Fellow of the Institute of Actuaries.
 F.L.S., Fellow of the Linnaean Society.
 F.M., Field Marshal.
 F.O., Foreign Office; Field Officer.
 Fo., Folio.
 F.O.B., Free on Board.
 F.R.A.S., Fellow of the Royal Astronomical or Asiatic Society.
 F.R.C.P., Fellow of the Royal College of Physicians.
 F.R.C.S., Fellow of the Royal College of Surgeons.
 F.R.G.S., Fellow of the Royal Geographical Society.
 F.R.H.S., Fellow of the Royal Historical Society; or of the Royal Horticultural Society.
 F.R.I.B.A., Fellow of the Royal Institute of British Architects.
 F.R.S., Fellow of the Royal Society.
 F.S.A., Fellow of the Society of Antiquaries; and Society of Arts.
 F.S.S., Fellow of the Statistical Society.
 F.Z.A., Fellow of the Zoological Academy.
 F.Z.S., Fellow of the Zoological Society.
 G.C.B., (Knight of the) Grand Cross of the Bath.
 G.C.L.H., Grand Cross of the Legion of Honour.
 G.C.M.G., Grand Cross of St. Michael and St. George.
 G.C.S.I., (Knight) Grand Commander of the Star of India.
 G.M., Grand Master.
 G.P.O., General Post office.
 G.T., Good Templars.
 H.B.M., His, or Her, Britannic Majesty.
 H.H., His Holiness; or His Highness.
 H.I.H., His Imperial Highness (or Her I.H.).
 H.I.M., His (or Her) Imperial Majesty.
 H.M.C., His, or Her Majesty's Customs.
 H.M.S., His, or Her Majesty's Ship, or Service.
 H.R.H., His, or Her Royal Highness.
 H.S.H., His, or Her Serene Highness.
 H.W.M., High Water Mark.

- I.**, *Imperator*, or *Imperatrix*, Emperor or Empress.
ib., *Ibidem*, the same place.
Id., *Idem*, the same.
I.C.E., Institute of Civil Engineers.
I.E., Indian Empire
i.e., *id est*, that is.
I.M., Isle of Man.
I.M.D., Indian Medical Department.
Inst., Instant, the present month.
Int., Interest.
I.O.F., Independent Order of Foresters.
I.O.O.F., Independent Order of Odd-fellows.
I.O.G.T., Independent Order of Good Templars.
I.O.U., I owe you.
I.R., Inland Revenue.
I.W., Isle of Wight.
J.A., Judge Advocate.
J.C., Jesus Christ.
J.P., Justice of Peace.
K.A., Knight of (the Order of) St Andrew (Russia).
K.B., King's Bench; or Knight of the Bath.
K.C., King's Counsel; Kings' College; or Knight of the Crescent.
K.C.B., Knight Commander of the Bath.
K.C.I.E., Knight Commander of the Indian Empire.
*** K.C.M.G.**, Knight Commander of St. Michael and St. George (Ionian Islands).
K.C.S.I., Knight Commander of the Star of India.
K.G., Knight of the Garter.
K.G.C.B., Knight of the Grand Cross of the Bath.
K.L.H., Knight of the Legion of Honour (France).
K.P., Knight of St. Patrick.
K.T., Knight of (the Order of) the Thistle; or Knights Templars.
L.A.C., Licentiate of the Apothecaries' Company.
L.A.S., Lord Advocate of Scotland.
L.C., Lord Chancellor; or Lord Chamberlain.
L.C.J., Lord Chief Justice.
L.C.P., Licentiate of the College of Preceptors.
Ld., or **Ltd.**, Limited.
E.D.S., Licentiate of Dental Surgery.
L.H.C., Lord High Chancellor.
L.J., Lord Justice.
L.L., Lord Lieutenant.
LL.B., Bachelor of Laws.
LL.D., Doctor of Laws; Doctor of Letters.
L.M.S., London Missionary Society.
L.P., Lord Provost.
L.R.C.P., Licentiate of the Royal College of Physicians.
L.R.C.S., Licentiate of Royal College of Surgeons.
M.A., Master of Arts; or Military Academy.
M.B., Bachelor of Medicine.
M.C., Master of Ceremonies.
M.C.P., Member of the College of Preceptors.
M.D., Doctor of Medicine.
M.E., Mining Engineer.
M.F.B., Metropolitan Fire Brigade.
M.F.H., Master of Foxhounds.
M.I.C.E., Member of the Institute of Civil Engineers.
M.I.M.E., Member of the Institute of Mining Engineers.
MM., *Messieurs*, gentlemen.
M.P., Member of Parliament.
M.P.S., Member of the Pharmaceutical Society.
M.R., Master of the Rolls.
M.R.A.S., Member of the Royal Asiatic Society; or Royal Academy of Science.
M.R.C.P., Member of the Royal College of Physicians, or Preceptors.
M.R.C.S., Member of the Royal College of Surgeons.
M.R.C.V.S., Member of the Royal College of Veterinary Surgeons.
M.R.G.S., Member of the Royal Geographical Society.
M.R.I., Member of the Royal Institution.
M.R.I.A., Member of the Royal Irish Academy.
MS., Manuscript.
Mus.B., Bachelor of Music.
Mus.D., Doctor of Music.
N.B., North Britain; New Brunswick; *nota bene*, mark well.
Nem. con., *Nemine contradicente*, without opposition.
Nem. dis., *Nemine dissentiente*, no person disagreeing, unanimous.
No., *Numero*, number.
Non Com., Non-Commissioned Officer.
Non seq., *Non sequitur*, it does not follow.
N.S.W., New South Wales.
N.W.T., North West Territories.

N.Y., New York (State).
 N.Z., New Zealand.
 Ob., *Obiit*, died.
 O.C., Officer Commanding.
 O.F., Odd Fellow.
 O.H.M.S., On His Majesty's Service.
 O.K., All correct.
 %, per cent.; or in the hundred.
 O.S., Ordinary Seaman; Old Style.
 Oxon., of Oxford.
 Oz., Ounce.
 P.C., Privy Councillor, or Police Constable.
 Per Pro., Per procuration.
 Ph.B., Bachelor of Philosophy.
 Ph.D., Doctor of Philosophy.
 P.L.C., Poor Law Commissioners.
 P.M., *Post Meridem*; after noon.
 P.M.G., Post Master General.
 P.O., Postal Order.
 P.O.O., Post Office Order.
 pp., Pages.
 P.P.C., *Pour prendre congé*, to take leave, say good-bye.
 P.P.S., Farther Postscript.
 P.R.A., President Royal Academy.
 Pro tem., *Pro tempore*, for the time being.
 Prox., *Proximo*, the next month.
 P.R.S., President of the Royal Society.
 P.S., Postscriptum.
 P.T.O., Please turn over.
 q.e., *Quod est*, which is.
 q.e.d., *Quod erat demonstrandum*, which is to be demonstrated.
 q.e.f. *Quod erat faciendum*, which is to be done.
 Qr., Quarter.
 Quant. suff., *Quantum sufficit*, a sufficient quantity.
 Q.V., *Quod vide*, which see.
 R.A., Royal Academy; or Royal Artillery.
 R.A.M., Royal Academy of Music.
 R.A.S., Royal Agricultural Society; Royal Asiatic Society; Royal Astronomical Society.
 R.C.Ch., Roman Catholic Church.
 R.C.P., Royal College of Physicians.
 R.C.S., Royal College of Surgeons.
 R.E., Royal Engineers.
 Rev., Reverend.
 R.H.A., Royal Horse Artillery; or Royal Hibernian Academy.
 R.H.S., Royal Historical Society; Royal Horticultural Society; Royal Humane Society.

R.I.B.A., Royal Institution of British Architects.
 R.L.O., Returned-Letter Office.
 R.M., Royal Marines; or Royal Mail.
 R.M.A., Royal Military Academy.
 R.M.S., Royal Mail Steamer, or Service.
 R.N., Royal Navy.
 R.N.R., Royal Naval Reserve.
 R.S.A., Royal Scottish Academy.
 R.S.O., Railway Sub-Office.
 R.S.P.C.A., Royal Society for Prevention of Cruelty to Animals.
 R.S.P.C.C., Royal Society for Prevention of Cruelty to Children.
 R.S.V.P., *Répondez s'il vous plaît*, answer if you please.
 Rt. Hon., Right Honourable.
 Rt. Rev., Right Reverend.
 S.A., South Australia.
 Sc., *Scilicet*, to make known; to wit.
 S.L., Solicitor at Law.
 S.P.C., Society for the Prevention of Crime.
 S.P.C.A., Society for Prevention of Cruelty to Animals.
 S.P.C.C., Society for Prevention of Cruelty to Children.
 S.P.C.K., Society for Promoting Christian Knowledge.
 S.P.G., Society for the Propagation of the Gospel.
 S.P.Q.R., *Senatus Populusque Romani*, Senate and People of Rome. Commonly used by drapers as a sign for "Small profits, quick returns."
 S.S., *Saint Simplicius* (on collars of office).
 S.T.P., *Sanctae Theologiae Professor*, Doctor of Divinity.
 T.C.D., Trinity College, Dublin.
 U.C., Upper Canada.
 U.K., United Kingdom.
 Ult., *Ultimo*, last month.
 U.S., United States.
 U.S.A., United States of America; or United States Army.
 V.C., Victoria Cross; Vice-Chancellor.
 Viz., *Videlicet*, namely.
 V.R., Victoria Regina; or Very Reverend.
 V.S., Veterinary Surgeon.
 W.S., Writer to the Signet.
 Xmas., Christmas.
 Y.M.C.A., Young Men's Christian Association.
 Y.P.S.C.E., Young People's Society of Christian Endeavour.

COOKERY

HOW TO COOK AND PREPARE FOOD

In preparing food we must remember to combine all necessary foods in a right proportion. Some foods are deficient in one respect, some superabundant in another: a little addition here and there helps digestion and supplies the body with what it needs. All cooks do this in obedience to the natural promptings of the appetite. To rice, rich in starch, they add butter and cream; with peas, they serve fat bacon; salt-fish has less nourishment than its egg sauce; beef steak is balanced by boiled potatoes. But the customs of the kitchen often err, and we have much to learn that our artificially stimulated appetites fail to teach.

Not only is the deficient supplied, but the indigestible is removed. Bran from flour, paring from potatoes, cellulose from vegetables, go to feed animals whose digestions are stronger than ours, and who utilise our discarded food to produce other in a form more fitted to our powers.

Another service that cookery does is to economise our food by heating it. Part of what we eat is used as fuel or heat-giving food—is burnt or oxidised, to keep the heat of the body at a certain point. Very hot food is always unwholesome, but warm food always goes further and is more nourishing than cold.

Stock and Soups.—The richness or quality of a soup depends more upon a proper choice of ingredients, and a proper management of the fire in the combination of those ingredients, than upon the quantity of solid nutritious matter employed; much more upon the art and skill of the cook than upon the sum laid out in the market. The average cook imagines

that the goodness of a soup depends upon the weight of meat she puts into it, and upon the size of the fire over which it is boiled.

Stock forms the basis of all meat soups and of the principal sauces; but except the rich clear stock used for consommé (or clear soup), it is not necessarily made from fresh beef. In making brown stock from the shin of beef, white stock from the knuckle of veal, or ordinary stock from the bones and the trimmings of meat, poultry, etc., the methods employed for completely extracting from the materials all their nutriment and flavour are the same; the result depends upon the quality and kind of material employed, and the length of time the simmering is continued. Five or six hours will extract from the materials all that is necessary and desirable for stock intended for clear soup; but many more hours of gentle simmering will be necessary to draw from the bones all the goodness they contain.

The exact quantity of liquid needed in making soup cannot, speaking generally, be given; so much depends on the rate of cooking, and whether the lid of the saucepan is kept on to prevent waste by evaporation. If the liquid becomes greatly reduced by rapid boiling but has been closely covered, the contents of the saucepan have merely become concentrated in strength and flavour, and water may be added to make up the original quantity. Should the liquid, by being allowed to boil in an uncovered saucepan, have wasted its strength and flavour, sufficient stock, milk, or whatever formed the basis of the soup, must be added to make up the original strength and quantity.

The following information and

directions will be found useful in making stock :—

1. Beef makes the best brown stock, but it lacks gelatinous substance; therefore stock for good consommé or clear soup, should be made of beef and veal.

2. White stock is usually made from veal, bones, and remains of poultry and calves' feet. The liquor in which calves' heads or fowls have been boiled makes excellent white stock.

3. Stock meat should be as lean and as fresh as possible. Never wash meat unless obliged, as it deprives its surface of all the juices. It should be cut into small pieces, in order to multiply the surfaces to be exposed to the softening and dissolving influences of the water.

4. The usual allowance of water is 1 quart to each lb. of meat.

Fish.—In preparing fish of any kind, the first point to be attended to is to see that it is perfectly clean. It is a common error to wash it too much, as by doing so the flavour is diminished. The best way to clean fish is to wipe it thoroughly with a clean, damp cloth. If the fish is to be boiled, a little salt and vinegar should be put into the water, to give it firmness, after it is cleaned. In consequence of the amount of oil certain fish contain, their liver and roes take longer to cook than the flesh, and should be put into the saucepan before the fish, if not cooked separately. Fish, except salmon, should be put into warm water, and cooked very gently, or the outside will break before the inner part is done. Hot water should not be poured on to the fish, as it is liable to break the skin; if it should be necessary to add a little water whilst the fish is cooking, it ought to be poured in gently at the side of the vessel. The fish-plate may be drawn up, to see if the fish be ready, which may be known by its easily separating from the bone. When done, it should be immediately taken out of the water, or it will become woolly. The fish-plate should be set crossways over the kettle, to keep hot for serving, and a cloth laid over the fish to prevent it losing its colour. The exact temperature of the water, at the time of placing the fish in the kettle,

depends on the kind of fish to be cooked. If it is too hot the skin breaks, and if it is cold much of the flavour is lost. Fish can scarcely cook too slowly; steaming is often better than boiling.

Fish to be fried or broiled must be dried on a soft cloth, after it is well cleaned and washed. Prior to frying, dip it lightly in flour, brush it over with egg, and cover it with some fine crumbs of bread. The fish, after it is fried, must be thoroughly drained and freed from fat. A sheet of white paper must be placed to receive it, in order that the superfluous grease is absorbed. It must also be of a beautiful colour, and all the crumbs appear distinct. Butter in frying gives a bad colour to fish; lard and clarified dripping are most frequently used, but oil is considered the best. The fish should be put into the fat or oil when the latter is hot enough to immediately harden the surface. There should be sufficient fat to well cover it.

When fish is broiled, it should be seasoned, floured, and laid on a very clean gridiron, which, when hot, should be rubbed with fat bacon or suet, to prevent the fish from sticking. It must be broiled over or before a very clear fire, that it may not taste smoky; and not too near, so that it does not get scorched. Fish may also be baked, stewed, and made into soups. In choosing fish, it is well to remember that it is possible it may be fresh and yet not good. In this work rules are given for the choice of each particular fish, and the months when it is in season. Nothing can be of greater consequence to a cook than to have the fish good, as, if this important course in a dinner does not give satisfaction, it is rarely that the repast goes off well.

Vegetables.—The time vegetables take to boil depends on their age. Young vegetables with tender fibres will, as a rule, cook in about 20 minutes, whereas those fully matured, and consequently containing a relatively larger amount of fibrous substance, will average no less than 40 minutes. The colour of green vegetables may be preserved by adding a little soda to the water in which they are boiled. The discoloration is due to hard water holding in

solution a certain amount of lime, which is destroyed by the addition of a little soda, thereby softening the water, and preserving the colour of the vegetables. As soon as the vegetables are sufficiently cooked they should be removed from the saucepan and drained, otherwise they absorb water, lose some of their flavour, and become discoloured.

All vegetables should be put into boiling water, to which salt should be added in the proportion of about 1 tablespoonful to 2 quarts of water. Salt greatly improves the flavour of the vegetables, and it also raises the boiling point of the water, thus tending to preserve their colour. Plenty of water should be used for green vegetables, and a little soda to soften the water and counteract the hardening effect of the salt. All vegetables must be kept boiling, but Jerusalem artichokes, vegetables marrows, and others of a similar character, must be boiled more gently than cabbage and other greens, otherwise they may break. As soon as the vegetables are sufficiently cooked the water should be drained from them, for some are liable to break, and one and all become watery when kept in the water after they are done. They may, however, be covered with a cloth and kept hot in a colander placed over an empty iron saucepan for a considerable time.

Pastry.—The quality especially to be desired in pastry is lightness, and this depends almost entirely upon the amount of cold air in the pastry when expansion takes place in the oven. The best pastry is, therefore, that which contains the greatest quantity of the coldest air prior to baking. The repeated foldings and rollings to which puff paste is subjected have this increase of air in view; while in short crust the expansion is aided by adding baking-powder, or other acid and alkaline substances, which, when moistened, combine to form a constituent identical in its composition and effect with that of the atmospheric air, to which puff paste entirely owes its lightness. The difference between puff, or flaky, and short crust is that in the former there are thin layers of air and pastry

alternating, and in the latter the air fills small cavities all over the paste.

The fat should be lightly, but very thoroughly, rubbed in with the tips of the fingers, never with the palms of the hands. The water should be added gradually, but quickly, to prevent hard lumps being formed, and to keep the consistence of the whole mass uniform. A knife should always be used for mixing, it being so much cooler than the hand. Some little practice is necessary to acquire the light, firm, even pressure and dexterous movements upon which success so largely depends. Paste should never be rolled backwards and forwards, but in short forward rolls, lifting the rolling-pin between the rolls. Puff paste should never be rolled off the edges, as this may force out some of the air; it is better to thin the edges by a little pressure, or an inward roll.

All kinds of pastry should be baked in a moderately hot oven, for a high temperature is necessary to expand the air or gas, and thus make the pastry light, and also to burst the grains of the flour, thereby enabling these to absorb the fat immediately it melts. Unless the heat is sufficiently great to act upon the flour in this manner, the melted fat runs out and leaves the paste less rich, and also, probably, both heavy and tough. An oven with a good bottom heat is desirable for baking tarts and tartlets; when heated from above it is advisable to bake, or partially bake, the tarts before filling them.

Roasting.—Of the various methods of preparing meat this is the most generally appreciated in this country, but it is not the most economical or advantageous, and is not to be recommended for small joints. It is effected by hanging the meat before the fire, and keeping it in motion to prevent the scorching of any particular part. When meat is properly roasted the outer layer of its albumen is coagulated, and thus the natural juices are prevented from escaping. In roasting meat the heat must be strongest at first, and it should then be much reduced. To have a good juicy roast, therefore, the fire must be red and vigorous at the very commencement

of the operation. In the most careful roasting some of the juice is squeezed out of the meat, and evaporating on its surface, gives it a dark brown colour, a rich lustre, and a strong aromatic taste. Besides these effects on the albumen, and the expelled juice, roasting melts the fat out of the fat cells.

Constant basting is necessary when roasting meat.

Very good roasts can be made in gas ovens.

In stirring the fire, or putting fresh coals on it, the dripping-pan should always be drawn back, so that there may be no danger of the coal, cinders or ashes falling down into it.

As a general rule, it may be here noted that for every pound of meat, beef or mutton, in ordinary-sized joints, a quarter of an hour should be allowed.

White meats, and the meat of young animals, require to be very well roasted, both to be pleasant to the palate and easy of digestion. Thus veal, pork, and lamb should be thoroughly done to the centre, and require more time than red meat.

Mutton and beef on the other hand, do not, generally speaking, require to be so thoroughly done, and they should be dressed to the point that, in carving them, the gravy should just run, but not too freely. Of course, in this, as in most other dishes, the tastes of individuals vary; and there are many who cannot partake, with satisfaction, of any joint unless it is what others would call over-dressed.

Baking.—The principal difference between roasting meat and baking it is that, in baking, the fumes caused by the operation are not carried off in the same way as in roasting. Much, however, of this disadvantage is obviated by the improved construction of modern ovens, and especially those in connexion with the best kitcheners and gas-cooking stoves, in which meat, as before stated, can be *roasted* in the oven. With meat baked in the generality of ovens there is undoubtedly a peculiar taste, which does not at all equal the flavour developed by roasting meat.

Should the oven be very brisk, it will be advisable to cover the joint with a piece of white paper, to prevent the meat from being scorched outside before the heat can penetrate into the inside. This paper should be removed half an hour before the time of serving dinner, so that the joint may take a good colour.

By means of a jar many dishes may be economically prepared in the oven. The principal of these are soups, gravies, jugged hare, beef tea; and this mode of cooking may be advantageously adopted with a ham, previously covered with a common crust of flour and water. There are some dishes which are at least equally well cooked in the oven as by roasting; thus, a shoulder of mutton and baked potatoes, a fillet or breast of veal, a sucking-pig, a hare well basted, will be received by connoisseurs as well when baked as if it had been roasted. Indeed, the baker's oven, or the family oven, may often, as we have said, be substituted with greater economy and convenience.

Boiling.—Boiling, though one of the easiest processes in cookery, requires careful management. Boiled meat should be tender, savoury, and full of its own juice, or natural gravy; but, through carelessness, it is too often sent to table hard, tasteless and innutritious. To ensure a successful result the heat of the fire must be judiciously regulated, the proper quantity of water kept up in the pot, and the scum which rises to the surface carefully removed. Only sufficient water to cover the meat should be used in boiling unless the flesh is boiled for the purpose of soup-making.

Many writers on cookery assert that the meat to be boiled should be put into *cold water*, and that the pot should be heated gradually; but Liebig, the highest authority on all matters connected with the chemistry of food, has shown that meat so treated loses some of its most nutritious constituents. "If the flesh," says the great chemist, "be introduced into the boiler when the water is in a state of brisk ebullition, and if the boiling be kept up for a few minutes, and the pot then placed in a warm place, so that the temperature of the water is kept at 158° to

165°, we have the united conditions for giving to the flesh the qualities which best fit it for being eaten." When a piece of meat is plunged into boiling water, the albumen which is near the surface immediately coagulates, thus forming a coating, which prevents the escape of the internal juice, and most effectually excludes the water which, by mixing with this juice, would render the meat insipid. Meat treated thus is juicy and well flavoured when cooked, as it retains most of its savoury constituents. On the other hand, if the piece of meat be set on the fire with cold water, and this slowly heated to boiling, the flesh undergoes a loss of soluble and nutritious substances while, as a matter of course, the soup becomes richer in these matters. The albumen is gradually dissolved from the surface to the centre; the fibre loses, more or less, its quality of shortness or tenderness, and becomes hard and tough: the thinner the piece of meat the greater is its loss of savoury constituents. This does not, however, apply to salted meat, which is best cooked by putting in cold water, and being brought very slowly to the boil.

In order to obtain well-flavoured and eatable meat, we must relinquish the idea of making good soup from it, as that mode of boiling which yields the best soup gives the driest, toughest, and most vapid meat. Slow boiling whitens the meat; and we suspect that it is on this account that it is in such favour with the cooks. The wholesomeness of food is, however, a matter of much greater moment than the appearance it presents on the table. It should be borne in mind that the whiteness of meat that has been boiled slowly is produced by the loss of some important alimentary properties.

The objections raised to the practice of putting meat on the fire in cold water, apply with equal force to the practice of soaking meat before cooking it, which is so strongly recommended by some cooks. Fresh meat ought never to be soaked, as all its most nutritive constituents are soluble in water. Salted and dried meats, however, require to be soaked for some time in water before they are cooked if they are over-salted and hard.

For boiling meat, the softer the water is the better. When spring water is boiled the chalk which gives to it the quality of hardness, is precipitated. This chalk stains the meat, and communicates to it an unpleasant earthy taste. When nothing but hard water can be procured it should be softened by boiling it for an hour or two before it is used for culinary purposes.

The fire must be watched with great attention during the operation of boiling, so that its heat may be properly regulated. As a rule the pot should be kept in a simmering state, and this cannot be done without vigilance.

The temperature at which water boils, under usual circumstances, is 212° Fahr. Water does not become hotter after it has begun to boil, however long or with whatever violence the boiling is continued. This fact is, of great importance in cookery, and attention to it will save much fuel. Water made to boil in a gentle way by the application of a moderate heat is just as hot as when it is made to boil on a strong fire with the greatest possible violence. When once water has been brought to the boiling point the fire may be considerably reduced, as a very gentle heat will suffice to keep the water at its highest temperature.

The scum which rises to the surface of the pot during the operation of boiling must be carefully removed or it will attach itself to the meat, and thereby spoil its appearance. The cook must not neglect to skim during the whole process, though by far the greater part of the scum rises at first. The practice of wrapping meat in a cloth may be dispensed with if the skimming be skilfully managed. If the scum be removed as fast as it rises, the meat will be cooked clean and pure and come out of the vessel in which it was boiled much more delicate and firm than when cooked in a cloth.

When taken from the pot the meat may be wiped if necessary with a clean cloth, or a sponge previously dipped in water and wrung dry. The meat should not be allowed to stand a moment longer than necessary, as boiled meat cannot be eaten too hot.

The time allowed for boiling must be regulated according to the size and

quality of the meat. As a general rule, a quarter of an hour or twenty minutes, reckoning from the moment when the boiling commences, may be allowed for every pound of beef or mutton. Veal requires from 20 to 25 minutes per lb., and pork 25 to 30 minutes.

A few observations on the nutritive value of salted meat may be properly introduced in this place. Every housewife knows that dry salt in contact with fresh meat gradually becomes fluid brine. The application of salt causes the fibres of meat to contract, and the juice to flow out from its pores. Now, as this juice is pure extract of meat containing albumen, osmazome, and other valuable principles, it follows that meat which has been preserved by the action of salt can never have the nutritive properties of fresh meat.

Fish, to be boiled, should as a rule be put into *warm* water, and the white-fleshed ones take less time to cook than the red.

Salmon should be put into *boiling* water to preserve its colour.

Poultry should be put into warm water, and be simmered very slowly. The skimming must not be neglected, or the flesh will lose its whiteness.

The vessels used for boiling should be made of cast iron, well tinned within and provided with closely fitting lids. They must be kept scrupulously clean, otherwise they will render the meat cooked in them unsightly and unwholesome. Copper pans, if used at all, should be reserved for operations that are performed with rapidity; as, by long contact with copper, food may become dangerously contaminated. The kettle in which a joint is dressed should be large enough to allow room for a good supply of water; if the meat be cramped and be surrounded with but little water, it will be stewed, not boiled.

Stewing.—In stewing it is not requisite to have so great a heat as in boiling. A gentle simmering in a small quantity of water, so that the meat is stewed almost in its own juices, is all that is necessary. The great merit that this process of cooking possesses is that it will render palatable and nutritious parts of meat that could not

be eaten if cooked by any other mode, and it is one of the most (if not the most) economical ways of cooking.

It has been said of a frying-pan and a stewpan, that the former is "the poor man's enemy," the latter "his friend."

Too often stewing is confounded with boiling, but they are actually different modes. *A stew should never boil*, as the meat will harden. Cook slowly and long. A large fire is not needed, and there is no process of cooking so easy as stewing. With a gentle heat under the pan we may leave a stew, as one cannot a roast or boil, to take care of itself. According to the quality of the meat so must the heat of the water used for stewing be regulated. For hard, gristly parts, or for an old fowl, cold water to start with is best, but it may be brought to boiling point before a prime steak or other good piece of meat be put in.

Frying.—This very favourite mode of cooking may be accurately described as boiling in fat or oil. Substances dressed in this way are generally well received, for they introduce an agreeable variety, possessing, as they do, a peculiar flavour. By means of frying, cooks can soon satisfy many requisitions made on them, it being a very expeditious mode of preparing dishes for the table, and one which can be employed when the fire is not sufficiently large for the purposes of roasting and boiling. The great point to be borne in mind in frying is that the liquid must be hot enough to act instantaneously, as all the merit of this culinary operation lies in the invasion of the boiling liquid, which carbonizes or burns at the very instant of the immersion of the body placed into it. It may be ascertained if the fat is heated to the proper degree by cutting a piece of bread and dipping it in the frying-pan for five or six seconds; and if it be firm and of a dark brown when taken out, put in immediately what you wish to prepare; if it is not let the fat be heated until of the right temperature. This having been effected, moderate the fire, so that the action may not be too hurried, and that by a continuous heat the juices of the substance may be preserved and its flavour enhanced. A *frying basket* or kettle must be used

for fish and other things that do not supply any fat in themselves. They should be *immersed* in the fat used for frying them, and such things as rissoles and croquettes cannot be properly cooked by dry frying. The oil, butter, or lard used need not be wasted, but can be strained and put away for another frying. All dishes fried in fat should be drained on a piece of paper or a cloth and reversed, and there left for a few minutes, so that any superfluous greasy moisture may be removed.

Braising.—This is one of the most delicious ways of cooking meat, etc., Heat given below by means of the stove on which the braising-pan is placed, and heat above with the hot cinders with which the upper part of the vessel is filled, produces the effect that is obtained by first browning, then stewing.

The meat to be cooked is placed in the pan with sufficient stock to just moisten it, and vegetables, seasoning, herbs, and spice to thoroughly well flavour it, then the lid is set on, and the whole may be left, as a stewpan, almost to take care of itself. The vegetables, etc., are to help form and flavour the gravy, and when dry meats are cooked in this way they may be larded with advantage, the larded side being uppermost; crispness to the lardoons will be given by the heat above.

The gravy obtained by this method of cookery should be strained, a little browning, thickening, and seasoning added if necessary, and served poured over the meat.

Broiling.—This may be done over the fire, but the orthodox way is to enclose the article to be cooked in a broiler, which is hung in front of the fire. This should be heated and the wires greased before using. An old-fashioned Dutch oven may be used for this mode of cooking.

Grilling.—To grill successfully depends very much upon the fire, which should be clear and hot. A little coke put with the coal makes the red, bright heat so essential for the grill, and it is better to cook in any other way than to attempt grilling over a dull or

smoky fire. Well hung, juicy meat is served to perfection by grilling.

The grid should first be well heated, then rubbed over with perfectly sweet suet, and meat laid upon this, exposed at once to a fierce heat, will retain its flavour and juices. Beef and mutton are generally preferred with some little red gravy left in, but veal cutlets or pork chops, after the first exposure to the red heat, should be lifted higher from the fire, as they need cooking through. The meat should be turned often upon the grid so as to avoid burning, but not with a fork.

Sautéing.—Is a sort of combination of frying and stewing. The pan used is a very shallow kind of stewpan, in which a little butter or very well clarified fat is melted, then the chop, kidney, or whatever is to be cooked is put into this, and when nearly done the fat is drained off and the article finished in sauce or stock.

Steaming.—The great importance and usefulness of this mode of cooking has till of late been overlooked, but now we begin to realize that steaming is one of the most economical ones known—economical in more than one sense. Not only is a saving of fuel effected by putting, say, a steamer full of potatoes over a boiling cabbage, thus using only one space on a stove for two vegetables, but the saving in the actual bulk and worth of articles steamed is great. It is such an easy, simple mode of cooking that it should be a popular one. Take, for example, a pudding, say a batter one. This is placed in the steamer over a boiling saucepan containing something not too strong in flavour to impart smell or taste to the steam given out, and there can be no anxiety on the part of the cook as to the result of the cooking of the pudding, no fear of its being watery or heavy as it may be if boiled, provided it be taken out directly it is done.

For some months of the year before new potatoes are within the reach of the majority, the old ones are almost invariably best when cooked by steam. Meat cooked by steam is delicate in flavour, but unlike vegetables it must be put in a tin of a smaller size than

the bottom of the steamer, as it is necessary to preserve the gravy. Slow cooking of this gives more gravy than could be obtained from the water in which a joint is boiled. Double and treble steamers are sometimes used, but for ordinary family cooking two fitted saucepans would be found sufficient.

The rules for steaming are simple enough : To keep the pot underneath that supplies the steam boiling, and to only cook such viands by means of the combination as are not likely to affect one another by smell or taste. Steaming is most useful for re-heating cooked vegetables or other foods.

Larding.—Dry meats and poultry are far better if larded, and with very little practice larding will not be difficult.

Bacon sold specially for the purpose must be sliced thinly, not more than a quarter of an inch thick, and this must be again cut in strips, about three to the inch for a large surface or narrower for a small bird or pieces of meat. The lardoons must then be put into the split end of the needle and drawn through the flesh as we should draw an ordinary cotton through, leaving equal quantities projecting where the needle enters and is drawn out.

The usual length for lardoons is from $1\frac{1}{2}$ to 2 inches, but long strips may be used run in and out again several times as we use cotton, but this is more difficult, particularly in hot weather, when the bacon is apt to get soft and break. It should be always kept in a cool place to render it hard and firm, and if it can be laid on ice for a time so much the better. A guinea fowl should be larded, and the breast of a turkey is better for being so treated; veal also gains much in flavour by larding.

When the larding is completed, if the pieces look at all uneven or ragged, they may be snipped into equality with a sharp pair of scissors.

Barding consists of placing thin slices of larding bacon with little incisions in them completely to cover that which should be otherwise larded. The bacon may be left on baked or roast articles when the bird or meat is

sent to table, when if a little glaze is at hand it should be brushed over with it, but it should be removed from boiling foods. A string should be used to tie these sheets of bacon upon the article barded. This way of treating poultry and game saves time in the basting that must otherwise be done.

Browning.—Namely, to give a bright brown colour to the upper part of many baked dishes, must be done with a salamander or, failing this, a hot shovel. Either one or the other is made red hot and held for a few moments over the dish till a bright brown colouring is given.

Such things as scalloped oysters and macaroni cheese are often quite cooked without being brown on the top, and if allowed to remain in the oven till the required colour is reached, they will become too dry.

Gas ovens are fitted so that no salamander is needed, but articles cooked in a kitchener or range oven very often require one to make them look inviting in appearance.

THE COOK'S MEASURES.

It will be convenient to remember that :—

Sixty drops of any thin liquid are equal to one teaspoonful.

Two teaspoonfuls to one dessertspoonful.

Four teaspoonfuls to one tablespoonful.

Three tablespoonfuls to one wineglassful.

Four wineglassfuls to one tumblerful.

1 lb. Wheat Flour is equal to about one quart.

1 lb. 2 ozs. Indian Meal to one quart.

1 lb. Butter, when soft, to one quart.

1 lb. Loaf Sugar (broken) to one quart.

1 lb. 1 oz. of White Sugar (pounded), or best moist, to one quart.

1 lb. 2 oz. Brown Sugar to the quart.

8 or 9 Hen's Eggs (ordinary size) before they are broken weigh about one pound,

THE COOK'S TIME TABLES.

When consulting these tables the following facts must be borne in mind.—

In every instance the times allowed for Cooking have been estimated by good average fires, properly kept up and suitable for each particular thing.

That during roasting or baking the joints, etc., have been carefully basted and looked after.

That in boiling the times stated have been after the water boils, and that the skimming has not been neglected.

From these tables it should be found easy to reckon the times to allow for cooking joints of different weights to those given, by adding or deducting in proportion to that stated. Thus, if a joint of ribs of beef weighing 8 lb. takes 2 hours to roast, and one of 10, 2½ hours, the time allowed will be found 15 minutes to the lb. between those weights, therefore a joint of 9 lb. should take 2½ hours if cooked in the same manner.

BEEF.

JOINT.	HOW COOKED.	WEIGHT. TIME.			WEIGHT. TIME.			WEIGHT. TIME.		
		lb.	h.	m.	lb.	h.	m.	lb.	h.	m.
Aitch-bone	Boiled	8	..	2 0	10	..	2 30	12	..	2 45
Brisket	Boiled	7	..	2 0	8	..	2 15	10	..	2 30
Ribs	Roasted	8	..	2 0	10	..	2 30	12	..	2 45
„ (Boned)	Roasted	7	..	2 0	9	..	2 30	11	..	2 50
Round	Roasted	6	..	1 30	9	..	2 10	12	..	2 45
*Rump-steak	Grilled	1	..	0 8	2	..	0 10	3	..	0 12
Rump-steak	Fried	1	..	0 10	2	..	0 12	3	..	0 14
Shin	Stewed	6	..	3 30	8	..	4 0	10	..	4 15
Silverside (salt)	Boiled	7	..	2 0	10	..	2 30	14	..	3 15
Sirloin	Roasted	10	..	2 35	13	..	3 15	16	..	4 0
Heart	Baked	4	..	1 45	5	..	1 30	—	..	—
Tail	Stewed	1½	..	1 30	2	..	1 50	—	..	—
Tongue	Boiled	6	..	3 15	—	..	—	—	..	—

* Time required depends on thickness more than weight.

VEAL.

JOINT.	HOW COOKED.	WEIGHT. TIME.			WEIGHT. TIME.			WEIGHT. TIME.		
		lb.	h.	m.	lb.	h.	m.	lb.	h.	m.
Breast'.	Stewed	6	..	2 15	8	..	2 20	10	..	3 0
Cutlet	Fried	1	..	0 12	2	..	0 15	3	..	0 18
Fillet	Roasted	9	..	3 45	12	..	4 15	14	..	4 30
Knuckle	Stewed	3	..	2 20	5	..	2 45	6	..	3 0
Loin	Roasted	10	..	2 50	12	..	3 10	16	..	3 20
Shoulder	Roasted	8	..	3 15	10	..	3 30	12	..	4 0
Shoulder	Stewed	8	..	3 30	10	..	3 50	12	..	4 10
Head	Boiled	12	..	2 30	13	..	2 45	14	..	3 0
Head	Stewed	12	..	4 40	13	..	4 50	14	..	5 0
Heart	Roasted	1	..	0 40	1½	..	0 50	—	..	—
Sweetbread	Stewed	1	..	0 25	1½	..	0 30	—	..	—

MUTTON.

JOINT.	How COOKED.	WEIGHT. TIME.			WEIGHT. TIME.			WEIGHT. TIME.		
		lb.	h.	m.	lb.	h.	m.	lb.	h.	m.
Breast	Boiled	3	..	1 30	4	..	1 45	5	..	2 0
Haunch	Roasted	10	..	3 20	12	..	0	16	..	4 30
Leg	Boiled	7	..	2 0	10	..	2 30	12	..	3 0
Leg	Roasted	7	..	2 0	10	..	2 30	12	..	2 45
Loin	Roasted	6	..	1 40	7	..	1 50	8	..	2 10
Neck (best end)	Roasted	3	..	0 50	4	..	1 0	5	..	1 20
" (scrag)	Stewed	1	..	1 45	1½	..	2 0	2	..	2 10
Saddle	Roasted	12	..	3 0	14	..	3 15	16	..	3 35
Shoulder	Roasted	6	..	1 30	8	..	1 45	9	..	2 0
Head	Boiled	5	..	1 30	6	..	1 45	7	..	2 0
Heart	Roasted	0½	..	0 30	—	..	—	—	..	—
Kidney	Grilled	1	..	0 6	—	..	—	—	..	—

LAMB.

JOINT.	How COOKED.	WEIGHT. TIME.			WEIGHT. TIME.			WEIGHT. TIME.		
		lb.	h.	m.	lb.	h.	m.	lb.	h.	m.
Breast	Stewed	1	..	1 10	2	..	1 20	3	..	1 30
Fore-quarter	Roasted	6	..	1 20	7	..	1 35	8	..	1 45
Hind-quarter	Roasted	7	..	1 35	8	..	1 45	9	..	1 50
Leg	Roasted	3	..	1 20	4	..	1 30	6	..	1 40
Loin	Roasted	3	..	0 50	4	..	1 5	5	..	1 15
Neck (best end)	Baked	2	..	0 40	3	..	0 50	4	..	1 0
Shoulder	Roasted	3	..	0 50	4	..	1 0	5	..	1 10

PORK.

PART.	How COOKED.	WEIGHT. TIME.			WEIGHT. TIME.			WEIGHT. TIME.		
		lb.	h.	m.	lb.	h.	m.	lb.	h.	m.
Ham (smoked)	Baked	8	..	3 45	10	..	4 0	12	..	4 20
Ham	Boiled	8	..	3 50	10	..	4 15	12	..	4 30
Ham	Boiled	3	..	2 0	4	..	2 15	5	..	2 25
Fore-loin	Roasted	6	..	2 15	8	..	2 40	10	..	3 0
Hind-loin	Roasted	6	..	2 15	8	..	2 40	12	..	3 0
Leg	Boiled	6	..	3 0	8	..	3 30	10	..	4 0
Leg	Roasted	6	..	2 15	8	..	3 10	10	..	3 30
Bacon	Boiled	2	..	1 30	4	..	2 0	6	..	2 20
Face (half)	Boiled	2	..	1 30	3	..	1 40	4	..	1 50

FISH.

NAME.	HOW COOKED.	SIZE OR QUANTITY.	TIME.	NAME.	HOW COOKED.	SIZE OR QUANTITY.	TIME.
			<small>h. m.</small>				<small>h. m.</small>
Bloaters . .	Grilled	Medium	0 5	Plaice . .	Broiled	Small	0 5
Brill . .	Boiled	Medium	0 20	„ (Filets) .	Fried	Large	0 5
Cod (head) .	Boiled	Medium	0 30	Salmon . .	Boiled	8 lb.	1 0
„ (Middle) .	Boiled	3 lb.	0 30	„ (Head, } Shoulders) }	Boiled	3 lb.	0 30
„ Steaks . .	Fried	Thick	—	„ (Middle) .	Boiled	3 lb.	0 30
John Dory .	Boiled	Medium	0 25	„ (Tail) .	Boiled	3 lb.	0 28
Eels . .	Souché	2 lb.	0 35	„ Cutlets .	Fried	Thick	0 7
Eels . .	Stewed	2 lb.	0 45	Shad . .	Boiled	Medium	0 40
Flounders .	Fried	Small	0 5	Smelts . .	Fried	1 doz.	0 5
Haddocks .	Baked	Large	0 45	Soles . .	Boiled	Large	0 9
„ Dried	Boiled	Medium	0 5	Soles . .	Fried	Medium	0 7
Herrings . .	Baked	Medium	0 30	Sprats . .	Fried	Medium	0 3
Lobster . .	Boiled	Large	0 40	Trout . .	Baked	Medium	0 30
Lobster . .	Boiled	Small	0 30	Trout . .	Stewed	Medium	0 40
Mackerel . .	Boiled	Large	0 13	Turbot . .	Boiled	Large	0 30
Mackerel . .	Boiled	Small	0 10	„ (Cut) .	Boiled	2 lb.	0 15
Mullet (Red) .	Baked	Medium	0 25	„ (Filletted)	Fried	Medium	0 10
„ (Grey) .	Baked	Medium	0 30	Whitebait .	Fried	1 quart	0 1½
Oysters . .	Scallop'd	Sm. tin	0 15	Whiting . .	Fried	Small	0 6
Plaice . .	Fried	Medium	0 5				

POULTRY AND GAME.

NAME.	HOW COOKED.	SIZE OR QUANTITY.	TIME.	NAME.	HOW COOKED.	SIZE OR QUANTITY.	TIME.
			<small>h. m.</small>				<small>h. m.</small>
Ducklings . .	Roasted	Medium	0 35	Guinea Fowl	Roasted	Medium	1 0
Ducks . .	Roasted	Large	1 0	Larks . .	Baked	1 doz.	0 15
Fowl . .	Boiled	Large	1 0	Pigeon . .	Grilled	Medium	0 15
Fowl . .	Boiled	Medium	0 45	Pigeon . .	Stewed	Medium	0 30
Fowl . .	Roasted	Medium	0 50	Rabbit . .	Boiled	Medium	0 40
Goose . .	Roasted	Large	1 50	Rabbit . .	Roasted	Large	0 50
Goose . .	Roasted	Small	1 25	Turkey . .	Boiled	Medium	1 45
Blackcock . .	Roasted	Large	0 50	Turkey . .	Roasted	Large	2 40
Duck (Wild) .	Roasted	Medium	0 25	Plover . .	Roasted	Medium	0 12
Grouse . .	Roasted	Medium	0 30	Ptarmigan .	Roasted	Medium	0 35
Hare . .	Jugged	Medium	3 30	Quail . .	Roasted	Medium	0 25
Hare . .	Roasted	Large	1 55	Snipe . .	Roasted	Medium	0 20
Leveret . .	Roasted	Medium	0 45	Teal . .	Roasted	Medium	0 12
Partridge . .	Roasted	Medium	0 30	Venison }	Roasted	Large	4 30
Pheasant . .	Roasted	Large	0 50	Haunch }	Roasted	Small	1 0
Green Goose .	Roasted	Medium	0 50	Woodcock .	Roasted	Medium	0 25

COOKERY RECIPES

APPLE DUMPLINGS, BAKED

Peel and core 5 or 6 cooking apples, and fill the centre with currants. Roll out $\frac{1}{2}$ a lb. of short crust paste thinly, and cut it into rounds nearly large enough to cover the apples. Place one in the centre of each round, wet the edges of the paste, and press gently to the top of the apple. Put them joined parts downwards on a baking sheet, and bake them 20 to 30 minutes in a moderately hot oven. When nearly done, brush lightly over with water, sprinkle over with castor sugar, and return to the oven to finish baking. Serve either hot or cold.

APPLE DUMPLINGS, BOILED

Pare and core 6 apples, fill the cavities with sugar, and add a clove to each. Roll out $\frac{1}{2}$ lb. of suet paste and cut the rounds large enough to rather more than $\frac{1}{2}$ cover the apples. Place one on each round of paste, slightly wet the edges, and press them gently to the top of the apples where they must be completely joined. Tie each dumpling in the corner of a well-floured pudding cloth, put them into boiling water, and boil gently from 40 to 50 minutes.

APPLE TART

Peel, core and cut 2 pounds of cooking apples into thick slices. Roll some short crust paste into an oval form a little larger than the top of the piedish, invert the dish in the centre of the paste, and cut round, leaving a $\frac{1}{4}$ inch margin on all sides. Line the edge of the piedish with the trimmings, put in half the apples, add 2 tablespoonfuls of moist sugar and 4 cloves, then the remainder of the fruit. Moisten the paste, lining the edge of the dish with water, put on the cover, press the

edges together, and notch them at intervals of about $\frac{1}{4}$ of an inch. Bake in a brisk oven from 40 to 50 minutes, and when the paste has risen and set, brush it over lightly with cold water, and dredge well with castor sugar. This must be done quickly, and the tart immediately replaced in the oven. If the tart is to be eaten cold, directly it leaves the oven the crust should be raised gently with a knife, to allow some of the steam to escape, otherwise it is apt to lose some of its crispness.

ARROWROOT (for Invalids)

Mix 1 dessertspoonful of arrowroot smoothly with a little cold milk, boil $\frac{1}{2}$ pint of milk or water and pour it on, stirring briskly meanwhile. Return to the stewpan, and boil for 5 minutes, stirring all the time. Add 1 teaspoonful of castor sugar and serve. If preferred, an equal quantity of water may be substituted for the milk.

ARTICHOKES, BOILED

Wash 2 or 3 Globe artichokes in several waters, cut off the stems and, if necessary, trim the leaves. Put them into boiling water, add about 1 teaspoonful of salt to each quart of water, and if the water be hard or the vegetable old, also add a piece of soda, the size of a Spanish nut. Keep the saucepan uncovered and boil quickly from 25 to 30 minutes, or until the vegetables are tender. Drain well, and serve with Hollandaise, white, or other suitable sauce, or, if preferred, oiled butter.

ASPARAGUS, BOILED

Bud and scrape the white part of the stems, beginning from the head, tie them into bundles of about

20 each, keeping all the heads in one direction. Cut the stalks evenly and keep the asparagus in cold water until it is time to cook it. Have ready a saucepan of boiling water, add a heaped teaspoonful of salt to each quart of water, put in the asparagus and boil gently for about 20 minutes, or until tender. Dish on toast, and serve with Hollandaise, white, or other suitable sauce, or, if preferred, oiled butter.

BACON, BOILED

As bacon is frequently excessively salt, let it be soaked in cold water for an hour or two previous to dressing it; then pare off the rusty parts and scrape the underside and rind as clean as possible. Put it into a saucepan of warm water, let it come gradually to a boil, and as fast as the scum rises to the surface of the water, remove it. Let it simmer very gently until it is thoroughly done; then take it up, strip off the skin, and sprinkle over the bacon a few bread-rasplings and garnish with tufts of cauliflower or Brussels sprouts, if liked. When served alone, young and tender broad beans or green peas are the usual accompaniments. 1 lb. of bacon should boil for $\frac{1}{2}$ hour; 2 lbs., $1\frac{1}{2}$ hours.

NOTE: Mild salted bacon may be put on to boil in tepid water.

BARLEY WATER

Mix 1 oz. of patent barley into a smooth paste, pour into stewpan containing 1 quart. of boiling water and the thinly-pared rind of $\frac{1}{2}$ a small lemon, and the sugar, and stir over the fire for 5 minutes. When cold, strain, and use. This forms a nutritious, agreeable drink, and it is also largely used to dilute milk, thus making it easier of digestion.

BATTER PUDDING, BAKED

Put 4 heaped tablespoonfuls of flour and a good pinch of salt into a basin, make a well in the centre, break in 1 egg, stir, gradually mixing in the flour from the sides, and add milk by degrees until a thick, smooth batter is formed. Now beat well for 10 minutes, then add the remainder of half a pint of milk; cover, and let it stand for at least 1 hour.

When ready to use, put a tablespoonful of dripping into a piedish, and while it is heating give the batter another good beating. Pour into the dish, and bake in a quick oven for about 35 minutes. Serve with sugar, butter and sugar, jam, or stewed fruit.

The batter may also be baked in small cups or on saucers (buttered). It may be varied by the addition of any kind of fresh or tinned fruit, or raisins, currants, candied peel, etc.

BATTER PUDDING, BOILED

Mix 6 oz. of flour and a good pinch of salt together, and make a well in the centre of the flour. Beat 4 eggs thoroughly, strain them into the flour, and stir gently so that the flour becomes gradually incorporated. Add $\frac{1}{2}$ to 1 pint of milk a little at a time until the batter has the consistency of thick cream; then cover, and let it stand for 1 hour. When ready, pour into a well-buttered basin, cover with a scalded, well-floured cloth, and boil for about $1\frac{1}{2}$ hours.

Boiled batter puddings may be varied by the addition of either fresh or dried fruits. They should be placed in the basin, and the batter poured over them.

BEANS, FRENCH, BOILED

Cut off the heads, tails, and a thin strip on each side of the beans, so as to remove the string. Cut the beans in a slanting direction into slips, and, as they are cut, drop them into cold water. Have ready a saucepan of boiling water, and 1 heaped teaspoonful of salt to each quart of water, and a small piece of soda if the beans are old or are to be kept a good colour. Put in the beans, keep the saucepan uncovered and boil briskly from 20 to 25 minutes according to age. Drain well, sprinkle with salt and pepper, then serve.

BEEF, BOILED

The aitchbone, round, and brisket, are all suitable for boiling. In boiling meat a certain proportion of the nutritive qualities escape into the water, and the liquor should therefore be utilized for soup, when it is not too salt for the purpose. With this end in view, the liquor should be reduced

to the smallest possible quantity by using a boiling-pot just large enough to contain the joint, with barely sufficient water to cover it. The meat must be skewered, or bound with twine, into a compact form. The water in which it is immersed should be warm unless the meat be very salt, then cold water is necessary to extract some of the salt. In either case, it should be heated gradually to boiling point, and well skimmed. With a joint weighing from 10 to 14 lbs., an allowance should be made of 2 or 3 medium-sized onions, 2 large or 4 small carrots, 1 large or 2 small turnips, and 12 peppercorns. The onions should be kept whole, the turnips cut into thick slices, and the carrots lengthwise into 2 or 4 pieces. They should be added after the liquor has boiled and been well skimmed. When suet dumplings form part of the dish they should be put into the liquor $\frac{1}{2}$ an hour before serving, the liquor being previously brought to the boil. To serve, replace the twine or skewers with one or 2 silver skewers, pour some of the liquor round the dish, and garnish with the vegetables. Allow from 20 to 30 minutes to each lb.

BEEF, BRAISED

Take 2 carrots and 1 turnip, cut them into dice, and put them and $\frac{1}{2}$ a lb. of button onions aside. Slice the remainder of the carrot and turnip, 1 or 2 leeks and 2 or 3 strips of celery, and place them in a stewpan just large enough to contain from 4 to 6 lbs. of fresh brisket of beef. Lay the meat on the top of the vegetables, cover with slices of bacon, add a bouquet-garni (parsley, thyme, bay-leaf), about 12 peppercorns, a little salt, and stock or water to nearly cover the vegetables. Put on a close-fitting lid, and cook as gently as possible for 4 or 5 hours. Meanwhile, heat 1 $\frac{1}{2}$ oz. of butter in a smaller stewpan, add 1 $\frac{1}{2}$ oz. of flour, stir and cook slowly until well browned, and then add some stock, using that from the larger stewpan when none other is available. Stir until boiling, season to taste, boil for at least 10 minutes, then strain and use. The carrot and turnip dice and button onions must be cooked separately in well-flavoured stock until

tender, and they may be added to the sauce, or arranged in groups round the dish on which the meat is served.

NOTE.—It is advisable to par-fry the vegetables before placing in the meat.

BEEF BROTH

2 quarts of good stock should be made from beef and veal bones, well skimmed, but not necessarily clarified. 1 carrot, 1 turnip and $\frac{1}{2}$ cabbage after being washed and pared, may be cooked whole in the stock-pot, or the carrot and turnip may be cut into round slices, and the cabbage into small pieces, and then the vegetables should be put in a stewpan with 2 oz. of butter, covered, and cooked slowly for about 10 minutes. Season with pepper, salt, and a little grated nutmeg. Strain the stock on to the vegetables, let them simmer for about 30 minutes, and skim occasionally. Cut a dinner roll into thin, round slices, place them on a baking sheet, bake them on both sides a golden brown in a moderate oven, put them in a soup-tureen, moisten with a little stock, pour the soup over, sprinkle over with a little chopped parsley or chives, and serve.

BEEF, COLD, CURRY OF

Put the bones and brown outside parts of 1 $\frac{1}{2}$ lbs. of cold roast beef into a saucepan, cover with cold water, and boil for at least 2 hours, then strain and use. Cut the meat into slices about $\frac{1}{4}$ inch thick and 1 inch square. Melt 1 $\frac{1}{2}$ oz. of butter in a stewpan, fry 2 onions coarsely chopped for 2 or 3 minutes, then add 1 tablespoonful each of curry-powder and flour, and fry gently for 5 minutes. Add 1 pint of stock, 1 teaspoonful of curry-paste, 1 sliced sour apple, and salt to taste; stir until the sauce boils, and simmer gently for half an hour. Now put in the meat, cover closely, draw the stewpan aside to prevent the contents boiling, and let it remain half an hour for the meat to become impregnated with the flavour of the sauce. Arrange the meat in a pyramidal form in the centre of a hot dish, season the sauce to taste, add a teaspoonful of lemon-juice, and strain over the meat. Serve the rice separately or as a border round meat.

BEEF, HASHED

Melt 1 oz. of butter, add 2 oz. of streaky bacon cut into dice, then 1 sliced onion and fry a light brown. Now lay in 1 lb. of cold roast beef cut into slices, pour over $\frac{1}{2}$ pint of brown and tomato sauces in equal proportions and cook slowly for $\frac{1}{2}$ an hour, without boiling. Dish up neatly with croûtes of bread fried in fat as garnish.

BEEF, LEG OF, STEW

Cut 1 lb. of leg or shin of beef into 6 or 8 pieces, put them in a dish, pour 2 tablespoonfuls of vinegar over, and let them remain at least 1 hour, turning them 2 or 3 times. When ready, put the pieces with the vinegar into a jar with a close-fitting lid, add a good seasoning of salt and pepper, a bouquet-garni (parsley, thyme, bay-leaf) 1 onion, 1 carrot and $\frac{1}{2}$ a turnip cut into thick slices. Put on the lid, cover with 2 or 3 thicknesses of greased paper, stand the jar either in a cool oven or in a saucepan of boiling water, and simmer slowly for 3 hours. When done, remove the bouquet-garni, and serve the stew in a hot dish, with its gravy.

BEEF PIE, BAKED

Remove the bones and the brown outside parts of about 2 lbs. of cold roast beef, simmer them slowly for at least 2 hours, strain, season, and use as gravy. Cut the meat into thin, small slices, peel slice and cook 3 small onions, and cut them into very thin slices. Spread a thin layer of mashed potato on the bottom of a piedish, on the top place a few slices of meat, add a little onion, sprinkle on some powdered mixed herbs, and season well with salt and pepper. Repeat until the dish is full, pour in as much gravy as the dish will hold, cover with the mashed potato, and bake in a moderate oven for about $\frac{1}{2}$ of an hour, until the surface is well browned. The potato should be smoothed, and shaped by means of a knife to resemble as nearly as possible a paste crust; and the appearance may be further improved by brushing over the top with beaten egg, or a little milk. Serve the remainder of the gravy separately.

BEEF, PRESSED

Wash the brisket of beef well in cold

water, put it into a saucepan with sufficient warm water to cover it, boil up, skim well, add 1 onion, 1 carrot, $\frac{1}{2}$ a turnip, prepared and sliced vegetables, bouquet-garni (parsley, thyme, bay-leaf), and 10 peppercorns, and simmer gently until the bones can easily be removed. Take the meat out of the saucepan, and having removed the bones, press it between two boards or dishes until cold. If brushed over with glaze before serving it has a better appearance. Dissolved gelatine strongly flavoured with one of the well-known brands of beef essence is a capital substitute for ordinary glaze.

BEEF, ROAST

The joints usually roasted are the sirloin, ribs, and aitchbones, and sometimes the round. When cooking a large sirloin, it is a good plan to cut off the thin end, and salt, cook, and press it. When the joint to be roasted consists of 1 or 2 ribs of beef off a large animal, it may be made compact and easier to carve by removing the bones, and skewering or tying the meat into a round form. The usual accompaniments to roast beef are gravy and grated horseradish, or horseradish sauce and Yorkshire pudding. Allow about $\frac{1}{2}$ of an hour for each lb. and $\frac{1}{4}$ of an hour over.

BEEFSTEAK AND KIDNEY PIE

Cut 2 sheep's kidneys, or $\frac{1}{2}$ a lb. of ox kidney, into thin slices across, dip them in seasoned flour; then place one on each slice of meat, roll up tightly, and put the roll on end in the piedish. Season with salt, pepper, and moisten with $\frac{1}{2}$ gill of water or gravy, line the edges of the dish, and then cover with rough puff paste. Ornament the surface with fancifully cut leaves of paste, flake the edge of paste, brush over with beaten egg, and bake in a fairly hot oven from $1\frac{1}{2}$ to $1\frac{3}{4}$ hours.

BEEFSTEAK AND KIDNEY PUDDING

Cut 2 sheep's kidneys or $\frac{1}{2}$ lb. of ox kidney into thin slices. Mix 1 tablespoonful of flour, 1 level teaspoonful of salt and $\frac{1}{2}$ teaspoonful of pepper, and dip each slice in the mixture. Cut 2 lbs. of beefsteak into thin slices, about 2 inches

in length and width, and place 1 slice of kidney on each slice of meat, roll up tightly, and place the rolls on end in the basin. In other respects, proceed as directed in the recipe for Beefsteak Pudding. Cook from 4 to 4½ hours.

BEEFSTEAK, FRIED

Although this method of cooking steaks is not to be recommended, it is often more convenient than grilling, and with proper care the tender juicy qualities of the steak may be preserved, but it is less easily digested, in consequence of the fat in which it is fried. Make the butter or fat hot in the frying-pan, have sufficient to barely cover the bottom of the pan, put in 1½ lbs. of rump steak, fry one side quickly, then turn and fry the other side. When the entire surface is browned and hardened the cooking should be done a little more slowly, to avoid burning the fat in the pan, the steak being repeatedly turned. The steak may be served with a little butter spread lightly on the surface, or with gravy. To make this, drain off all the fat, add a little boiling water to the sediment in the fryng-pan, season with salt and pepper, boil up, skim, strain, and serve round the dish or separately in a sauceboat.

BEEFSTEAK PUDDING

Cut 2 lbs. of beefsteak into thin slices, about 2 inches in length and width, but not necessarily uniform in shape. Mix 1 tablespoonful of flour, 1 level teaspoonful of salt, and ½ teaspoonful of pepper together on a plate, and dip each slice in the mixture. Make 1 lb. of suet paste, cut off about ½ of it, and put it aside for the lid; roll out the remainder to the size of the basin, which must be previously well greased. Line the basin with the paste, put in the meat, sprinkle the rest of the seasoning mixture between the layers, and leave spaces to admit water, thus preventing the pudding becoming too dry. Three-quarters fill the basin with boiling water, which extracts less of the juices of the meat than cold water, put on the cover, and moisten, and seal the edges. If the pudding is to be boiled, tie over a scalded and floured pudding cloth. If steamed,

cover with a greased paper. Let the water be quite boiling, put in the pudding and boil for 3½ hours, or steam for 4 hours. Allow from 4 to 4½ hours to cook.

BEEF TEA

Remove the fat, and shred finely, 1 lb. of gravy beef or pass it twice through a mincing machine. Place it in an earthenware jar, add 1 pint of cold water and 1½ teaspoonful of salt, and cover closely. Place the jar in a saucepan of boiling water, or in a slow oven, and cook slowly for 3 hours, stirring occasionally. Strain, remove carefully all traces of grease, and serve.

BLACK CURRANT WINE

To each pint of juice obtained from the black currants add 1 pint of cold water, 1 lb. of preserving sugar, and a good glass of French brandy.

Take away the stalks, put the currants into an earthenware bowl, bruise well with a wooden spoon, then drain off the juice and put it aside. Add the water to the berries, stir them frequently for 2 or 3 hours, then strain the liquid and mix with the juice. Add the sugar, and as soon as it is dissolved turn the whole into a cask. When fermentation has ceased rack off the liquid into a smaller cask, add the brandy, bung closely, and let it remain for at least 12 months in a warm place. At the end of this time drain the wine off carefully into dry bottles, cork them tightly, and store in a dry, moderately-warm place.

BLANCMANGE

Mix 2 oz. of patent cornflour smoothly with a little milk, boil about another 1½ pints of milk with a bay-leaf, and let it infuse for 10 or 15 minutes. Now stir in the blended cornflour, and cook gently for 7 or 8 minutes, then remove the bay-leaf, add 1½ oz. of castor sugar, and pour into a mould previously rinsed with cold water. When set turn out into a dish. Serve with jam, stewed fruit or fruit syrup.

BREAD AND BUTTER PUDDING, BAKED

Cut off the crust of 5 or 6 thin slices of bread and butter and divide

each slice of bread into 4 squares, arrange them in layers in a well-buttered piedish, and sprinkle each layer with sultanas or whatever is being used. Beat 2 eggs, add 1 dessert-spoonful of sugar, stir until dissolved, then mix in 1 pint of milk and pour gently over the bread, which should only half fill the dish. Let it stand at least 1 hour for the bread to soak, then bake in a moderately cool oven for nearly 1 hour.

BROAD BEANS

This favourite vegetable, to be nice, should be young and freshly gathered. After shelling the beans, put them into boiling water, salted to taste, and boil rapidly until tender. Drain them well in a colander, dish and serve separately a boat of parsley sauce. Boiled bacon often accompanies this vegetable, but should be cooked separately. This dish is usually served with the beans laid round the bacon, and the parsley butter sauce in a tureen. Beans also make an excellent garnish to a ham; when used for this purpose they should have their skins removed. For very young beans allow 15 minutes; when of a moderate size, 20 to 25 minutes, or longer.

BROWN GRAVY

Cut $\frac{1}{2}$ lb. of neck or shin of beef and 1 small slice of lean bacon into small pieces, peel and slice 1 medium-sized onion, melt 1 oz. of sweet dripping in the stewpan, put in the meat, bacon, and onion, and fry till brown. Add 1 quart of water, salt, pepper, and clove, cook slowly for 3 or 4 hours, and strain. Melt 1 oz. of butter in a stewpan, stir in $\frac{1}{2}$ oz. of flour, and cook for 5 minutes, when brown add the gravy, stir until it boils, skim, simmer for 10 minutes and use as required.

BRUSSELS SPROUTS, BOILED

Clean the sprouts from insects, wash them, and pick any dead or discoloured leaves from the outsides; put them into a saucepan of boiling water, with salt and a very small piece of soda (to each $\frac{1}{2}$ gallon of water allow 1 heaped tablespoonful of salt); keep the pan uncovered, and let them boil quickly

until tender; cook from 20 to 30 minutes after the water boils; drain, dish, and serve with a tureen of melted butter; *maitre d'hôtel* sauce is sometimes poured over them. *Another method of serving is to toss the sprouts in about 1 oz. of butter and a seasoning of pepper and salt. They must, however, be sent to table very quickly, for on account of the smallness of the sprouts this vegetable soon cools.

BUBBLE AND SQUEAK

Melt a little butter or fat in a frying-pan, put in some thin slices of cold roast or boiled beef, fry quickly until lightly browned on both sides, then remove and keep hot. Put in 1 shredded onion, fry until brown, add some cold mashed potatoes and cold greens of any kind, and season to taste. Stir until thoroughly hot, then add a little vinegar, if liked, and turn on to a hot dish. Place the slices of meat on the top, and serve.

CABBAGE OR SAVOY, BOILED

Pick off all the dead outside leaves, cut off as much of the stalk as possible, and cut the cabbages across twice at the stalk end; if very large, quarter them. Wash them well in cold water, place them in a colander, and drain; then put them into plenty of fast-boiling water, to which have been added salt and a very small piece of soda (to each $\frac{1}{2}$ gallon of water allow 1 heaped tablespoonful of salt). Stir the cabbages once or twice in the water, keep the pan uncovered, and let them boil quickly until tender. The instant they are done take the cabbages up into a colander, place a plate over them, let them thoroughly drain, dish, cutting them, into squares. For small young cabbages allow 15 to 20 minutes; large cabbages and savoys, from 30 to 40 minutes.

CABINET PUDDING, PLAIN

Cut 2 tablespoonfuls of raisins in halves and remove the stones. Cut the crusts off 5 or 6 thin slices of bread (or, in place of bread, savoy finger biscuits or stale cake may be advantageously used for this pudding), divide each slice into strips 1 inch wide, taper one end, and trim to a uniform length. Have ready a well-buttered basin,

decorate with raisins, and line with strips of bread. Beat 2 eggs, add to them 1 tablespoonful of sugar, 1 pint of milk, a few drops of almond essence or other flavouring, and stir until the sugar is dissolved. Cut all the bread trimmings into dice, put them into the prepared basin, pour on the custard, cover with a greased paper, and steam gently from 1 to 1½ hours.

CAKE, PLAIN, FOR CHILDREN

If bread is not made at home, procure the dough from the baker's, and as soon as it comes in put 1 quartern into a basin near the fire; cover the basin with a thick cloth, and let the dough remain a little while to rise. In the meantime, beat ½ lb. of butter or good beef dripping to a cream, and make ½ pint of milk warm; when the dough has risen, mix with it thoroughly ½ lb. of moist sugar, ½ teaspoonful of grated nutmeg (or ½ oz. of caraway seeds), the butter and milk, and well rub the mixture to obtain a smooth, soft dough. Butter some cake-tins, half fill them, and stand them in a warm place to allow the mixture to rise again. When the tins are ¾ parts full, put the cakes into a good oven, and bake them from 1½ to 2 hours. A few currants or sultanas can be substituted for the caraway seeds, when the flavour of the latter is disliked.

CAKE, PLUM, COMMON

Rub 6 oz. of butter or good dripping into 10 oz. of flour, add 10 oz. of moist sugar, 8 oz. of currants or raisins, and ½ oz. of ground allspice; warm 1½ pints of new milk, and dissolve 1 oz. of distillery yeast in it, mix the whole into a soft dough, knead it well, and put it into 6 buttered tins. Place them near the fire for 1 hour, or until they are light, then bake the cakes in a good oven from 1 to 1½ hours. To ascertain when they are done, plunge a clean skewer in the middle, and if it comes out clean, the cakes are done.

CAPER SAUCE

Make ½ pint of melted butter as directed, add to it 1 tablespoonful of capers, either cut in two or coarsely

chopped, 1 dessertspoonful of vinegar, salt and pepper, and use.

If for serving with boiled mutton, make the melted butter sauce with the liquor in which the meat was boiled, instead of plain water.

CARROTS, BOILED

Cut off the green tops, wash and scrape the carrots, and remove any black specks. If the carrots are very large, cut them in halves, divide them lengthwise into 4 pieces, and put them into boiling salted water (to each ½ gallon of water allow 1 heaped tablespoonful of salt); let them boil until tender, which may be ascertained by piercing the carrots with a skewer or fork, then drain well. Young carrots should be boiled whole. For young carrots, about ½ an hour; old ones, from 1 to 1½ hours.

CAULIFLOWER, BOILED

Choose cauliflowers that are close and white, trim off the decayed outside leaves, and cut the stalk off flat at the bottom. Open the flowers a little in places to remove the insects, which generally are found about the stalk, and let the cauliflowers lie in salt and water for an hour previous to dressing them, with their heads downwards; this will effectually draw out all insects. Put them into fast-boiling water, with the addition of salt in the proportion of 1 heaped tablespoonful to each gallon of water, and let them boil gently, keeping the saucepan uncovered. The water should be well skimmed. When the cauliflowers are tender, take them up with a slice, let them drain, and lay them carefully in the dish. Serve with white sauce or else plain melted butter, a little of which may be poured over the cauliflowers. Allow for a small cauliflower, 12 to 15 minutes; a large one, 20 to 25 minutes, after the water boils.

CELERY, BRAISED

Trim and wash 3 or 4 heads of celery, cut each head into 2 or 3 portions, and tie up each with 4 inch lengths of thin twine. Range them into a well-buttered sauté-pan, season with salt,

pepper, and nutmeg, and moisten with $\frac{1}{2}$ pint of rich stock. Cut 2 or 3 slices of streaky bacon into strips, fry them a little, and put these on top of the celery. Cover the pan, and put it in a hot oven to cook its contents for about 30 minutes. When done, take up, drain the celery, and reduce the liquor or stock, adding a little brown sauce to it; also a little meat glaze. Dress the celery on a vegetable dish, strain over some of the sauce, and serve hot.

CHEESE, TOASTED

Knead 1 oz. of butter, 1 mustard-spoonful of dry mustard, and a good pinch of cayenne well together on a plate. Prepare one slice of buttered toast, trim the edges, cover with 3 oz. of Cheshire or Cheddar cheese sliced very thinly, and spread on $\frac{1}{2}$ oz. of butter. Now add a further 3 oz. of sliced cheese, cover with butter as above, and cook under the grill or in a Dutch oven before the fire until the cheese is melted. Serve as hot as possible.

CHICKEN, BOILED

Truss the chicken for boiling. Have ready a saucepan just large enough to contain the chicken, and as much boiling stock or water as will cover it. Rub the breast of the bird with lemon, wrap it in a buttered paper, put it into the saucepan, bring to the boil, and skim well. Add 1 onion and 1 carrot, sliced, bouquet-garni (parsley, thyme, bay-leaf), 6 white peppercorns, and salt if necessary, and cook very gently until the chicken is tender. A young bird should be ready to serve at the end of 1 hour, but an old bird may need twice that length of time. Meanwhile, melt $1\frac{1}{2}$ oz. of butter in a stewpan, add $1\frac{1}{2}$ oz. of flour, cook for a few minutes without browning, pour in the stock (use some of the liquor in which the chicken was cooked if none other is at hand), and boil up, stirring all the time. Season to taste, and simmer for 10 minutes, or until the chicken is ready. Remove the trussing string, place on a hot dish, pour over the sauce, which must be thick enough to coat it, garnish with chopped truffle, parsley, or hard-boiled yolk of egg, and serve.

CHICKEN, ROAST

Truss the chicken for roasting, prick the entire surface of the breast with the point of a metal skewer or trussing needle, skewer over it 2 or 3 slices of bacon, baste well with hot fat, and roast before a clear fire or in a moderate oven for about 1 hour. Baste frequently, and a few minutes before serving remove the bacon for the breast to brown. Meanwhile, simmer the neck (and the liver and gizzard when not trussed in the wings) in $\frac{1}{2}$ pint of stock. When the chicken is sufficiently cooked, remove it to a dish, drain off every particle of fat, taking care not to disturb the sediment, pour in the stock, boil for 2 or 3 minutes, season and colour to taste, and strain into a sauceboat. Have ready some watercress well washed, drained, and season lightly with salt and pepper, and use as garnish. Serve both gravy and bread sauce separately.

CHOCOLATE, TO MAKE

Make $\frac{1}{2}$ pint of milk and $\frac{1}{2}$ pint of water hot, break the chocolate into small pieces, add it, in the proportion of $\frac{1}{2}$ oz. to every pint of milk and water, and stir until quite dissolved. Bring to boiling point, then strain, and serve with sugar.

CHRISTMAS PUDDING

Sift $\frac{1}{2}$ lb. of flour and 1 oz. of Paisley flour well together, mix $\frac{1}{2}$ lb. of chopped suet with the flour, and add $\frac{1}{2}$ lb. of breadcrumbs, $\frac{1}{2}$ lb. of sultanas, $\frac{1}{2}$ lb. of raisins (stoned) 4 ozs. of mixed candied peel, $\frac{1}{2}$ lb. of castor sugar, and 1 lemon grated rind and juice. Stir in 3 beaten eggs and sufficient milk to make the mixture rather moist. Boil in one or two well-greased pudding basins for 4 hours. A wineglassful of brandy may be added if liked.

CIDER

Cider is the fermented juice of apples: The juice is extracted by first crushing the apples in a cider-mill, and afterwards subjecting the pulp to heavy pressure. The product is either diluted with water, or it is allowed to ferment in barrels, which in some districts are closed at the top

and in others open, and simply covered with a cloth. When active fermentation has subsided the cider is drawn off into casks, where it remains for several months before it is ready for bottling or drinking. Some varieties of effervescing cider almost approach champagne in character.

CLEAR OX-TAIL SOUP

Cut an ox-tail into short lengths, cover with cold water, add a little salt, bring to the boil, and strain. Return to the saucepan with 1 carrot, $\frac{1}{2}$ a turnip, 1 onion, 1 strip of celery, a bouquet-garni (parsley, thyme, bay-leaf), 6 peppercorns, 2 cloves, 1 blade of mace, salt, simmer gently for four hours, keeping the stewpan covered, strain, put the meat aside, and when the stock is cold remove the fat. Clarify with the whites and shells of 2 eggs, strain, re-heat, and serve garnished with pieces of the tail, and a little carrot and turnip cooked and cut into some fancy shape. A tablespoonful of arrowroot previously mixed smoothly with a little stock, is sometimes added when a slightly thickened "clear" soup is desired.

CLEAR SOUP

Put 2 quarts of brown stock, which should be cold and quite free from fat, into a clean, well-tinned stewpan, add 1 lb. of lean neck of beef finely chopped, 1 carrot cut in 2 or 3 pieces, 1 onion (left whole), a strip of celery, 12 peppercorns, 6 allspice, 2 cloves, salt, the shells of 4 eggs crushed, and the whites stiffly whipped, and whisk all together over a gentle fire until just on boiling point, then let it simmer about $\frac{1}{2}$ an hour. Strain through a clean dry cloth, re-heat, and season to taste before serving. A glass of sherry, a dessertspoonful of French vinegar or lemon-juice, and a pinch of castor sugar, are frequently added when reheating the consommé.

COCK-A-LEEKIE SOUP

Truss a small fowl for boiling, put it in a large stewpan or stock-pot, with enough water to well cover it, add a little salt, and let it come to the boil. Remove the scum, then add 1 carrot, 1 turnip (previously cleaned), and 1

onion, peeled and stuck with 2 cloves. When the fowl is tender take it out. Wash a small bunch of young leeks, trim off the roots and outside leaves, and cut into 1 inch lengths. Strain the broth (which should measure about 3 pints) into another stewpan, add the leeks and 2 oz. of rice, previously washed and blanched. Boil for about $\frac{1}{2}$ an hour, season to taste, cut the fowl in half, divide one half into very small pieces, and put these into the soup. Use the remainder for some other purpose. Before serving, add a teaspoonful of chopped parsley to the soup; if preferred the fowl need not be served in the soup, but it is essential that this soup should be made from chicken stock.

COCOA, TO PREPARE

To 1 $\frac{1}{2}$ teaspoonfuls of prepared cocoa, allow $\frac{1}{2}$ pint of milk and $\frac{1}{2}$ pint of water. Mix the cocoa smoothly with a little cold water, boil the remainder of the water and the milk, and pour these on to the blended cocoa, stirring well meanwhile. Rock cocoa should be broken into small pieces, and simmered gently for a few minutes in the milk and water.

COD WITH PARSLEY BUTTER

Boil 2 lbs. of cod (cold remains will serve) and afterwards separate into large flakes. Melt 4 oz. of butter in a stewpan, a teaspoonful of finely-chopped onion, and fry for 2 or 3 minutes without browning; then put in a teaspoonful of finely-chopped parsley, the juice of $\frac{1}{2}$ a lemon, a good pinch of pepper, and the fish. Shake gently over the fire until quite hot, then serve.

COD'S ROE, FRIED

Boil 1 lb. of cod's roe for 15 minutes, then drain and cut it into slices. When cold, brush over with egg, roll in breadcrumbs, and fry until nicely browned in hot fat.

COFFEE, TO MAKE

Allow 1 good tablespoonful of freshly-ground coffee to each $\frac{1}{2}$ pint of water. Place the coffee in the coffee chamber of a cafetière and pour the boiling water through the distributor on

COOKERY RECIPES

to the coffee. When the boiling water has percolated through the fine strainer with which the coffee-pot is provided, and has been allowed to stand for a few minutes, it will be found to be quite clear and ready to serve. Coffee may be allowed to just come to the boil, but boiling it, even for a short time, destroys its flavour and aroma.

COLLEGE PUDDING

Mix together 4 oz. of breadcrumbs, 4 oz. of finely-chopped suet, 2 oz. each of currants and sultanas, cleaned and picked, 2 oz. of sugar, a good pinch each of grated nutmeg, ground cloves, ground cinnamon, salt, and $\frac{1}{2}$ a teaspoonful of baking-powder, add 2 eggs, previously well beaten, and stir until thoroughly mixed. Put the mixture into well-buttered dariole moulds, and either bake for about 25 minutes or steam 35 minutes. Serve with a good wine or brandy sauce.

COTTAGE SOUP

Cut 2 lbs. of lean neck of beef into thin slices, $\frac{1}{2}$ lb. of streaky bacon into dice or cubes, and 1 onion, 1 carrot and $\frac{1}{2}$ a turnip, into thin slices. Melt 2 oz. dripping in a stewpan, fry the bacon, meat, and onion until nicely browned, then add the sliced vegetables, 2 quarts of water, salt, and pepper, cover closely and simmer for 1 hour. Meanwhile 2 lbs. of potatoes should have been prepared, and, if very large, cut in two. Add them to the soup, and when they have been cooking $\frac{1}{2}$ hour sprinkle in a teaspoonful of rice. Cook gently for another $\frac{1}{2}$ hour (2 hours altogether), and if the potatoes and rice are tender, season the soup to taste, and serve.

CURRENT PUDDING, BOILED

Mix together $\frac{1}{2}$ lb. of currants, cleaned, $\frac{1}{2}$ lb. of suet, finely chopped, and 1 lb. of flour, and add sufficient milk to form a stiff batter. Turn the mixture into a floured cloth, boil gently for 2 $\frac{1}{2}$ hours, and serve with a cut lemon, fresh butter, and sugar.

CUSTARD

Beat 2 eggs, add $\frac{1}{2}$ pint of milk, a good pinch of salt, sweeten and flavour

to taste. The preparation may be baked in a pie dish, steamed in a basin, or cooked in a jug placed in a saucepan of boiling water. *Savoury custard* may be made by substituting salt, pepper, and parsley for the sugar and flavouring, and some or all of the milk should be replaced by good white stock.

CUSTARD, BOILED

Rinse a stewpan with cold water to prevent the milk sticking to the bottom. Put in $\frac{1}{2}$ pint of milk and lemon rind, bay-leaf, vanilla-pod, or other flavouring, simmer gently until pleasantly flavoured, and add 1 to 1 $\frac{1}{2}$ oz. of castor sugar, according to taste. Strain on to 3 yolks of eggs, stirring meanwhile, return to the stewpan, and stir by the side of the fire until the mixture thickens. Considerable care is needed to cook custard in this manner without curdling it, and any one inexperienced should, instead of replacing the preparation in the stewpan, pour it into a jug or double saucepan, placing whichever is used in a saucepan of boiling water, and stir until the custard coats the spoon. Add 2 tablespoonfuls of thick cream, stir 2 or 3 minutes longer to cook the cream, and let the custard cool, stirring frequently meanwhile.

CUSTARD PUDDING, BAKED

Beat 2 eggs, add to them 1 dessert-spoonful of loaf or castor sugar and $\frac{1}{2}$ pint of milk, and stir until the sugar is dissolved. Strain into a buttered piedish, and bake in a slow oven until set (about 30 minutes). When the oven is too hot the dish should be placed in a tin of water, to prevent the custard baking too quickly.

CUTLETS, GRILLED

Trim 6 mutton cutlets, brush over with liquid butter, and grill them over or in front of a clear fire from 7 to 8 minutes, turning the cutlets 2 or 3 times during the process. The cutlets should be brushed over with butter each time when turned; and, if liked, may be served with a pat of butter, which may be varied by mixing with it a little chopped parsley, a few grains of cayenne, and a few drops of lemon-juice.

DROP CAKES

Add 2 teaspoonfuls of baking-powder to 1 lb. of flour on the board, well mix it, or rub it through a sieve 2 or 3 times. Put $\frac{1}{2}$ lb. of butter and $\frac{1}{4}$ lb. of castor sugar into a clean basin, and beat it well up into a cream with the hand, add 4 eggs one at a time, beating well after each addition of egg, and when all are well beaten in, add the flour, and moisten the mixture with milk to batter consistency. Scrape down the sides with a palette-knife, and with the point of the knife mix in all the material scraped down. Have some clean white sheets of kitchen paper cut to the size that will fit the baking-plates or tins, and with a spoon lay out small cakes all over the sheets of paper, allowing about $1\frac{1}{2}$ inches between each cake or drop, which should be about the size of half a walnut shell; then dust lightly over with sugar and bake in a moderate oven.

DROPPED SCONES

Mix together 6 tablespoonfuls of flour, 2 level teaspoonfuls of castor sugar, 1 teaspoonful of baking powder, $\frac{1}{2}$ teaspoonful of carbonate of soda, and $\frac{1}{2}$ teaspoonful of salt, beat and add 1 egg and enough milk to form a fairly stiff batter, and beat until smooth. Have the girdle ready heated, grease it lightly with butter or fat, and drop on the batter, a tablespoonful at a time, until the girdle is full. Cook until the scones are covered with bubbles on the top, and lightly browned on the under side, then turn and cook the other side. They may be served either hot or cold

EEL, CONGER.

This is much esteemed by many persons. It forms the basis of the well-known soup, and is also made into pies. Like a tough steak, it always needs long stewing or cooking, as the flesh is remarkably firm and hard. It should be cooked like a fresh-water eel.

EELS, FRIED

Wash, skin, and dry 1 or 2 medium-sized eels thoroughly, and divide them

into pieces from $2\frac{1}{2}$ to 3 inches long. Mix 1 tablespoonful of flour, $\frac{1}{2}$ a teaspoonful of salt, and $\frac{1}{4}$ of a teaspoonful of pepper together, and roll the pieces of eel separately in the mixture. Coat carefully with egg and breadcrumbs, fry in hot fat until crisp and lightly browned, then drain well, and serve garnished with crisply-fried parsley.

EELS, STEWED

Skin and clean 2 lbs. of eels, cut them into pieces about 2 inches long, and place them in a jar. Add 2 oz. of butter, 1 medium-sized onion cut into slices, 1 dessertspoonful of chopped parsley, salt and pepper, cover closely, and place the jar in a saucepan of cold water, which must be brought slowly to the boil. Cook until the eels are tender; this will take about $1\frac{1}{2}$ hours from the time the water boils. When done, place on a hot dish, and strain the gravy over

EGGS, BOILED

Eggs for boiling cannot be too fresh, but a longer time should be allowed for boiling a new-laid egg than one that is 3 or 4 days old. Have ready a saucepan of boiling water, put the eggs into it gently with a spoon, letting the spoon touch the bottom of the saucepan before it is withdrawn, to avoid cracking the shell. For those who like eggs lightly boiled, 3 to $3\frac{1}{2}$ minutes will be found sufficient, 4 minutes' gentle boiling will lightly coagulate the white, and 5 minutes will set it firmly. Eggs for salads and sandwiches should be allowed to boil for 10 minutes. Cracking the shell and allowing the egg to remain in water until cold prevents a dark rim forming round the yolk.

EGGS, FRIED

Heat 2 oz. of butter or fat in a frying-pan. Break 4 eggs into cups, slip them gently in the hot butter or fat, and fry until the whites are set. Whilst they are frying, draw the whites gently over the yolks with a spoon, and when set baste them well with the butter or fat. Take the eggs up with a slice, drain well from fat, trim them neatly, and serve on slices of toast. If the eggs are to be

served with ham or bacon, cook them in the fat obtained by frying the same.

EGGS, POACHED

Eggs for poaching should be fresh, but not new-laid; for if poached before they have been laid 36 hours, the white is so milky that it is almost impossible to coagulate it. To prepare, boil some water in a shallow stewpan, or deep frying-pan, add salt to taste, and allow to each pint of water 1 tablespoonful of vinegar, or 1 teaspoonful of lemon-juice. Break the egg into a cup, taking care to keep the yolk whole, and when the water boils remove the pan to the side of the fire, and gently slip the egg into it. Tilt the pan, with a tablespoon, gently fold the white of the egg over the yolk, so as to produce a plump appearance, and simmer gently until the white is set. Take it up carefully with a slice, trim the edges, if necessary, and serve either on buttered toast, slices of ham or bacon, or spinach.

EGGS, TO CHOOSE

The freshness of eggs may be tested in several ways. One ingenious apparatus is a speculum, furnished with an interior looking-glass, which renders the egg sufficiently transparent to show if it is fresh, infected, or really bad. If fresh, a clear disc is thrown; if stale, a cloudy disc with spots; and if bad, a dark unsightly disc is visible. Another method of ascertaining their freshness is to hold them before a lighted candle or to the light. If the egg looks clear, it will be perfectly good, but if there is a black spot attached to the shell, it is worthless. The former test cannot be put into practice when purchasing eggs in the ordinary way, and the latter, test can only be applied at night-time when an artificial light is burning. To an experienced buyer the size, weight, and appearance of eggs indicate their value, stale eggs being considerably lighter than those newly-laid. Eggs that cannot be relied on should always be broken separately.

EGGS, TO KEEP

Procure the eggs warm from the nest, grease them thoroughly all over

with butter, lard or oil, lay them in a box on a thick layer of bran, and surround each egg with a little bran, to prevent them touching each other. Cover each layer of eggs thickly with bran.

ELDER WINE

Take 7 lbs of elderberries, 3 gallons of water and to each gallon of liquid thus obtained add 3 lbs. of good loaf sugar, 1 lb of raisins, $\frac{1}{2}$ an oz. of ground ginger, 6 cloves, $\frac{1}{2}$ pint of brandy, and $\frac{1}{2}$ teaspoonful of brewer's yeast.

Strip the berries from the stalks, pour the water, quite boiling over them let them stand for 24 hours, then bruise well and drain through a hair sieve or jelly bag. Measure the juice obtained, put it into a preserving pan with sugar raisins, ginger and cloves in above stated proportions. Boil gently for 1 hour, and skim when necessary. Let the liquid stand until milk warm, then stir in the yeast and turn the whole into a clean, dry cask. Cover the bung-hole with a folded cloth, let the cask remain undisturbed for 14 days, then stir in the brandy and bung tightly. In about six months the wine may be drawn off into bottles, tightly corked, and stored for use.

FIG PUDDING

Chop 8 oz. of dried figs finely, add to them 6 oz. of finely-chopped suet, 4 oz. of breadcrumbs, 4 oz. of flour, 4 oz. of sugar, a good pinch of salt, a good pinch of nutmeg, and mix well. Beat 2 eggs, add $\frac{1}{2}$ pint of milk, pour into the mixture, and stir well. Turn into a greased basin, and steam for 2 $\frac{1}{2}$ hours. Serve with a suitable sweet sauce.

FISH CAKES

Heat 1 oz. of butter in a saucepan, add the remains of any cold fish (coarsely chopped), mashed potatoes (to each lb. of fish allow $\frac{1}{2}$ lb.), the yolk of 1 egg, salt, pepper, and sufficient milk to moisten thoroughly. Stir the ingredients over the fire for a few minutes, then turn on to a plate. When cold, shape into round, flat cakes, brush them over with egg, cover with breadcrumbs, and fry in hot fat. The fish may be made into one large cake

Instead of several small ones, in which case, grease a flat tin, and shape the mixture as much like a fish as possible. Brush it over with egg, cover with slightly browned breadcrumbs, and bake for about 20 minutes in a fairly hot oven.

NOTE.—This dish may be varied by the addition of forcemeat, made of 2 tablespoonfuls of finely-chopped suet, 2 tablespoonfuls of breadcrumbs, 1 teaspoonful of finely-chopped parsley, salt, pepper, grated lemon-rind, or other flavouring, and moistened with egg or milk; or the forcemeat may be made of 1 tablespoonful of picked and coarsely-chopped shrimps, breadcrumbs, a teaspoonful of anchovy essence, 1 tablespoonful of melted butter, salt, pepper, cayenne, and a little milk. When using forcemeat, spread one half of the fish-cake mixture on the tin in the form of a sole, spread the forcemeat in the centre, leaving bare a narrow margin at the sides, cover with the remainder of the mixture, brush over with egg, sprinkle with browned breadcrumbs, and bake in a moderate oven for 35 for 40 minutes.

FISH, CURRIED

Divide 1 lb. of cooked fish into rather large flakes. Heat 1 oz. of butter in a stewpan, fry a finely-chopped small onion till lightly browned, sprinkle in 1 level dessertspoonful of curry powder and 1 level teaspoonful of flour, and when smoothly mixed add to the fish $\frac{1}{2}$ pint of milk, and boil for 5 or 6 minutes. Season to taste, add a few drops of lemon-juice, and serve plainly or accompanied by boiled rice, as preferred.

FISH PIE

Free 1 lb. of cooked cod or other white fish from skin and bone, and chop it coarsely, add 4 oz. of finely-chopped suet, 2 tablespoonfuls of mashed potato, 2 tablespoonfuls of white breadcrumbs, and a good seasoning of salt and pepper. Now stir in 2 eggs with as much milk as will form the whole into a stiff batter, and turn the mixture into a well-buttered baking-dish suitable for sending to table. Cover the surface lightly with brown breadcrumbs, and put small

bits of butter here and there, and bake in a moderate oven for about 1 hour, or until the mixture is set. Serve hot in the dish in which it is cooked, or if prepared overnight, re-heat at the time of serving.

FISH STEW

Clean, wash, and dry 3 or 4 small flounders, plaice, or other white fish, and cut it into neat fillets. Remove the skin and bones from some of the smaller pieces, and coarsely chop the fish, which should fill 2 tablespoons. To this add 2 tablespoonfuls of breadcrumbs, 1 teaspoonful of finely-chopped parsley, $\frac{1}{4}$ of a teaspoonful of finely-grated lemon-rind, season with salt and pepper, bind with a little beaten egg, and shape into small balls. Melt $\frac{1}{2}$ oz. of butter, fry 1 small chopped onion slightly, add a pinch each of ginger, mace, and cayenne, and a little salt and pepper. Put in the filleted fish, barely cover it with hot water, bring to the boil, then lay the forcemeat balls on the top of the fish. Cover with a greased paper, to keep in the steam, simmer gently for 15 to 20 minutes, then transfer to a hot dish. Strain the liquor over the remainder of the 2 beaten eggs, replace in the stewpan, season to taste, and add 1 tablespoonful of lemon-juice. Stir by the side of the fire until the sauce begins to thicken, taking care that it does not boil, or it may curdle, then pour over the fish, and serve.

FORCEMEAT FOR FISH

Beard and mince 8 oysters, prepare and mix 3 oz. of breadcrumbs, 1 teaspoonful of minced savoury herbs, 2 anchovies (these may be dispensed with), 2 oz. of suet chopped, salt, pepper, pounded mace to taste, and blend the whole thoroughly together. Moisten with 6 tablespoonfuls of cream or milk, and the yolks of 2 eggs, put all into a stewpan, and stir the mixture over the fire for 4 or 5 minutes till it thickens. Stuff the inside of the fish with the preparation, and sew up the opening.

FORCEMEAT, VEAL

Pass $\frac{1}{2}$ lb. of lean veal twice through the mincing machine, then pound it

and $\frac{1}{2}$ lb. of finely-chopped beef suet and 2 oz. of fat bacon cut into fine strips in the mortar. Pass through a wire sieve, and 2 tablespoonfuls of freshly-made breadcrumbs, 1 dessert-spoonful of finely-chopped parsley, $\frac{1}{2}$ a teaspoonful of finely-chopped onion, 2 eggs, a pinch of ground mace, a pinch of nutmeg and season to taste, and use.

FRUIT, STEWED

Apples and pears intended for stewing should be peeled, quartered, and cored. Gooseberries should have the tops and tails cut off; rhubarb is usually sliced, and if at all old the stringy outer skin is stripped off. Other fruit, such as cherries and plums, should have the stalks removed, but the stones may be taken out or not, as preferred. Bring $\frac{1}{2}$ pint of water and 4 oz. of sugar to the boil, add 1 lb. of fruit, and stew very gently until tender. Or, place the fruit and sugar in a jar, stand the jar in a saucepan of boiling water, and cook until tender.

FRYING-BATTER

Put 4 oz. of flour and a saltspoonful of salt into a basin, add gradually $\frac{1}{2}$ pint of tepid water and 1 tablespoonful of salad-oil or clarified butter, and mix into a smooth batter. If time permits, put it aside for about 1 hour, then just before using stir in lightly two stiffly-whisked whites of eggs.

GINGER BEER

Remove the rinds of 2 lemons as thinly as possible, strip off every particle of white pith, cut the lemons into thin slices, removing the pips. Put the sliced lemon into an earthenware bowl with 1 $\frac{1}{2}$ lbs. of sugar, 1 oz. of whole ginger, bruised, and $\frac{1}{2}$ oz. of cream of tartar, and pour in 5 quarts of boiling water. Allow it to stand until milk-warm, then stir in a good tablespoonful of brewer's yeast, and let the bowl remain in a moderately warm place for 24 hours. Skim the yeast off the top, strain the ginger-beer carefully from the sediment, bottle, tie the corks down securely, and in two days it will be ready for use.

GINGER PUDDING

Mix 12 oz. of flour, 6 oz. of finely-

chopped suet, 1 tablespoonful of ground ginger, 1 teaspoonful of baking-powder, and a good pinch of salt well together. Stir in 8 oz. of treacle and $\frac{1}{2}$ pint of milk, turn the mixture into a well-greased basin, and cover with a greased paper. Steam for about 2 hours, and serve with custard or cornflour sauce or sweet melted butter.

GOOSEBERRY FOOL

Top and tail 1 lb. of green gooseberries, cook them until tender with $\frac{1}{2}$ pint of water and 2 oz. of loaf sugar in a jar placed in a saucepan of boiling water. Rub them through a hair sieve, add more sugar if necessary, and let the pulp become quite cold. Whip $\frac{1}{2}$ pint of cream stiffly, and stir it into the preparation a few minutes before serving. Send to table in custard-glasses or in one large dish.

GOOSEBERRY TART

With a pair of scissors cut off the tops and tails of 1 $\frac{1}{2}$ pints of gooseberries; put them into a deep piedish, pile the fruit high in the centre, and put in $\frac{1}{2}$ lb. of moist sugar; line the edge of the dish with short crust paste, put on the cover of paste, and ornament the edges of the tart; bake in a good oven for about $\frac{2}{3}$ of an hour, and, before serving, dredge with castor sugar.

GOOSE, ROAST

Prepare and truss the goose, put the onion forcemeat inside the body, baste it well with hot fat, and either roast or bake from 2 to 2 $\frac{1}{2}$ hours, according to size and age. Baste frequently and if the surface is not well browned, dredge with flour when the bird is three-quarters cooked. Remove the trussing string, serve on a hot dish, and send $\frac{1}{2}$ pint of good beef stock or gravy and apple sauce to table in sauceboats.

GRAVY FOR HASHES, Etc

Break the bones of the joint to be hashed into small pieces and slice 1 small onion, 1 strip of celery, and $\frac{1}{2}$ a small carrot. Put them into a saucepan, add the trimmings of the meat, sufficient water to cover the bones, bouquet-garni (parsley, thyme,

bay-leaf Salt and pepper, simmer for 2 hours, then strain. Measure the gravy when made, and to each $\frac{1}{2}$ pint allow $\frac{1}{4}$ oz. of butter, and a dessert-spoonful of flour. Melt the butter in a stewpan, add the flour, and fry brown. Put in the gravy, stir until it boils, season to taste, and use as required. A little ketchup, or other sauce may be added if liked.

GRAVY SOUP

Cut 1 lb. of neck or shin of beef (lean) into small pieces. Make 1 oz. of butter hot in the stewpan, put in the meat and 1 sliced carrot, onion, $\frac{1}{2}$ turnip and a strip of celery, and fry until brown. Add 3 pints of second stock or gravy stock, bouquet-garni (parsley, thyme, bay-leaf), 8 pepper-corns, 2 cloves, and seasoning, and cook very gently for 2 $\frac{1}{2}$ to 3 hours, strain, return to the saucepan, boil up, mix 1 oz. of flour smoothly with a little cold stock, pour it into the soup, simmer 5 minutes longer, add seasoning to taste, and serve.

GROUND RICE PUDDING

Boil 1 pint of milk, sprinkle in 3 oz. of ground rice, simmer gently for 20 minutes, then stir in 1 tablespoonful of sugar, (or to taste), 1 oz. of butter and 2 eggs. If bay-leaf or vanilla-pod is the flavouring ingredient, it should be cooked in the milk; if essence is used, it is better to add it just before baking the mixture. Turn into a buttered piedish and bake gently for about $\frac{1}{2}$ an hour.

GRUEL, BARLEY (for Invalids)

Mix 1 oz. of patent barley into a smooth paste of a creamy consistency, put into a stewpan with $\frac{1}{2}$ pint of water and the thinly-cut rind of $\frac{1}{4}$ of a lemon, and simmer for 10 minutes, stirring all the time. Sweeten to taste, add a small glass of port wine (optional), and serve.

GRUEL

Mix 1 tablespoonful of patent groats with a little cold water (or milk and water mixed), boil the remainder of a pint, pour in the blended groats, and stir until boiling. Simmer gently for $\frac{1}{2}$ an hour or less if it thickens, stirring

frequently. Strain, add a pinch of salt, and sweeten to taste. Nutmeg, ginger, butter or cream are frequently added when the gruel is intended as a remedy for a cold.

HADDOCK, BAKED

Wash, clean, and scale 1 large fresh haddock. Make some veal forcemeat as directed, put it inside the haddock, and sew up the opening. Truss in the shape of the letter S by means of a string securely fastened to the head of the fish, the trussing needle being passed through the body of the fish while held in the required shape, and the string afterwards secured to the tail. Brush over with egg, cover lightly with brown breadcrumbs, and bake in a moderate oven from 30 to 40 minutes, basting occasionally with hot fat. Serve with anchovy or melted butter sauce.

HADDOCK, BOILED

Clean and wash the fish, cover it with warm water, add salt to taste, bring to the boil, and cook gently from 15 to 20 minutes. Serve with anchovy, parsley, or melted butter sauce.

HADDOCK, FRIED

Wash and dry a fresh haddock, cut down the back, separate the flesh from the bone, and cut into nice filets. Brush over with egg, cover lightly with breadcrumbs, and fry until golden-brown in hot fat. Garnish with fried parsley.

HALIBUT, BAKED

Wash and dry 2 lbs. of halibut (cut in one thick slice) thoroughly, sprinkle it liberally with salt and pepper, and dredge well with flour. Place it in an earthenware baking-dish, or piedish, add 1 oz. of butter in small pieces, and bake gently for about 1 hour. Serve on a hot dish with the liquid from the fish strained and poured around.

HALIBUT, BOILED

Add salt to hot water in the proportion of 1 oz. to 1 quart, put in 3 or 4 lbs. of halibut, bring slowly to boiling point, and simmer very gently from 25 to 30 minutes, or until the fish will

part easily from the bone. Drain well, arrange on a hot serviette garnished with slices of lemon and parsley, and serve the sauce (about $\frac{1}{2}$ pint of anchovy or shrimp sauce) separately.

HALIBUT STEAKS

Wipe and thoroughly dry 2 or 3 slices of halibut, season 1 tablespoonful of flour with salt and pepper, and dip each slice of fish in the mixture. Coat carefully with beaten egg and powdered crackers, and fry in hot fat until lightly browned. Drain well, and serve on a dish paper or folded serviette garnished with fried parsley.

HARICOT BEANS, BOILED

Put 1 quart of white haricot beans into cold water, and let them soak for several hours, according to their age; then put them into cold water, salted in the proportion of 1 heaped tablespoonful to 2 quarts of water, bring them to the boil, and let them simmer very slowly for about 2 hours, until tender. Pour away the water, and let them stand by the side of the fire, with the lid of the saucepan partially off, to allow the beans to dry; then add 1 oz. of butter and a seasoning of pepper and salt. Toss the beans for about 5 minutes, then dish up and serve.

HARICOT MUTTON

Divide 2 lbs. of neck of mutton into cutlets, and if very fat remove some of it. Heat about 1 oz. of butter or fat in a stewpan, fry the meat quickly until the entire surface is lightly browned; meanwhile, sprinkle it with flour so as to make it brown more quickly. When ready, add $\frac{1}{2}$ pint of boiling water, a small clove of garlic, bouquet-garni (parsley, thyme, bay-leaf), and a little salt and pepper, cover with a close-fitting lid, and cook very slowly for 1 hour. In the meantime heat 1 oz. of butter, fry 4 rather small peeled turnips (cut into thick slices), brown, then drain them and put them into the stewpan containing the meat, also 2 carrots, previously scraped and cut into neat pieces. Continue to cook slowly until both meat and turnips are tender, then pile the meat in the centre

of a hot dish, and arrange the pieces of turnip round the base. Trim well to remove some of the fat, then strain the gravy over the meat, and serve.

NOTE.—In France a handful of haricot beans are added to this stew and cooked with the meat.

HERRINGS, BAKED FRESH

Wash 12 fresh herrings in 3 or 4 waters, cut off the heads, split them open, and remove the gut and backbone. Season well with salt and pepper, and roll them up tightly, beginning with the neck of the fish. Pack the herrings closely in a piedish, cover them with thin slices of onion (using 1 or 2 Spanish onions), half fill the dish with equal quantities of vinegar and water, and bake in a very slow oven for 2 hours. When done, remove the onion, but let the fish remain in the dish in which they were cooked until ready to serve.

HERRINGS, BROILED

Fry 1 finely-chopped onion in 1 oz. of butter until lightly browned, put in $\frac{1}{2}$ oz. of flour and 1 teaspoonful of mustard, add $\frac{1}{2}$ pint of vinegar and $\frac{1}{2}$ pint of water, stir until boiling, and simmer gently for 15 minutes. Wipe and dry 4 fresh herrings, remove the heads, and score them across the backs and sides, but avoid cutting the roe. Sprinkle them with salt and pepper, and grill over or in front of a clear fire from 10 to 15 minutes. Place on a hot dish, strain the sauce round, and serve.

HORSERADISH SAUCE (Cold)

Remove the yolks from the whites of 2 hard-boiled eggs, put them in a basin, work with a wooden spoon until quite smooth, then add $\frac{1}{2}$ gill of wine vinegar gradually, and stir the mixture until it becomes creamy. Add 1 oz. of grated horseradish, 1 teaspoonful of castor sugar, $\frac{1}{2}$ teaspoonful of salt, and lastly 1 tablespoonful cream, stir a little longer, and serve in a sauce-boat, or as directed.

INVALID JELLY

Dissolve $\frac{1}{2}$ oz. of vegetable isinglass in $\frac{1}{2}$ pint of cold water, add 6 oz. of castor sugar and $\frac{1}{2}$ pint of orange or

lemon-juice (or half of each), and let the mixture cool slightly. When ready, add the yolks of 2 eggs well beaten, pour into a mould previously rinsed with cold water, and put aside until firm. When a less acid jelly is required, equal parts of lemon and orange juice may be preferred to lemon juice, or water may replace a part of the lemon juice.

IRISH STEW

Cut 3 lbs. of neck of mutton into pieces convenient for serving, and trim off some of the fat. Wash, peel, and slice 4 lbs. of potatoes and 1 large onion, peel 12 button onions and blanch them. Put a layer of potatoes at the bottom of a stewpan, cover these with a layer of meat, add a slice or two of onion, and season well with salt and pepper. Repeat until all the materials are used; the top layer must consist of potato, and the button onions should be interspersed. Add $1\frac{1}{2}$ pints of stock or water, and when it comes to the boil skim well, but unless the meat be very fat very little subsequent skimming is needed, as the potatoes absorb the greater part melted out of the meat. The stewpan must be kept covered, and the contents cooked gently for about $1\frac{1}{2}$ hours, or until the potatoes are thoroughly cooked and the stew loses its watery appearance. If liked, a teaspoonful of mushroom or walnut ketchup may be added before serving. Pile in the centre of a hot dish, sprinkle on a little chopped parsley and serve.

JOHN DORY

This fish which is very highly esteemed, and is dressed in the same way as a turbot, which it resembles in firmness but not in richness. Cleanse it thoroughly, cut off the fins but not the head, which is considered a delicacy, lay it in a fish-kettle, cover with warm water, and add salt to taste. Bring it gradually to near boiling point, and simmer gently for 15 minutes, or rather longer, should the fish be very large. Serve on a hot napkin, and garnish with cut lemon and parsley. Lobster, anchovy, or shrimp sauce, and plain melted butter should be sent to table with it.

JUNKET, PLAIN

Make 1 quart of milk lukewarm, and then add 3 oz. of sugar and some grated nutmeg (or lemon or vanilla flavouring). Dissolve 1 junket tablet in $\frac{1}{4}$ a wineglass of cold water, and stir it into the milk quickly. Set in a moderately warm place for half an hour, until it is firm, then place aside for an hour to cool. Serve as a custard is served.

KIDNEY, FRIED

Cut the sheep's kidneys open lengthwise, but without quite dividing them, and remove the skins. Run a skewer through them to keep them flat, place the kidneys, cut side down, in a frying-pan containing a little hot butter, and fry quickly on both sides. Season with salt and pepper, pour a little hot gravy round them, and serve as hot as possible.

KIDNEY, FRIED (BEEF)

Cut 1 lb. of ox-kidney into slices about $\frac{1}{4}$ of an inch thick, and remove the core. Make 2 oz. of butter hot in a sauté pan, mix 1 tablespoonful of flour, $\frac{1}{4}$ a teaspoonful of salt, and $\frac{1}{4}$ teaspoonful of pepper together on a plate, dip the slices of kidney in the mixture, and fry them gently in the butter for about 20 minutes, turning them 2 or 3 times, and keeping the sauté pan covered. Have ready a very hot dish, arrange the kidney neatly in two rows, add 1 teaspoonful of lemon-juice, 1 teaspoonful of finely-chopped parsley, and a pinch of cayenne to the butter in the sauté pan, and pour over the kidney. Serve as hot as possible.

KIDNEY SOUP

Cut $\frac{1}{2}$ lb. of lean beef and $\frac{1}{2}$ lb. of ox-kidney into very small pieces. Melt 1 oz. of butter in a stewpan, and fry the meat, kidney, $\frac{1}{4}$ tablespoonful of chopped parsley, and 1 tablespoonful of coarsely-chopped onion until brown. Put in 3 pints of stock or water, salt, and pepper, bring to the boil, skim well, then cover and simmer gently for 3 hours. Strain, pound the meat if convenient; if not, rub as much as possible of it through a wire sieve,

Return the soup to the saucepan, and when boiling add the purée of meat, and 1 oz. of flour (previously mixed smoothly with a little water), simmer for a few minutes, and serve. If preferred, the soup may be garnished with a little carrot and turnip, cooked and cut into some small fancy shape.

LAMB, BOILED

The leg of lamb is the part usually selected for boiling, but this method of cooking is not often adopted. Careful and frequent skimming is essential to preserve the colour of the meat, and the liquor in which it is cooked must contain nothing to destroy or overpower its delicate flavour. The peas, carrots, or whatever is served as a garnish, should be cooked separately, and the meat masked with a good white sauce.

LAMB CUTLETS, GRILLED

Trim 9 or 10 cutlets (cut from the best end of the neck) into a good shape, brush over with salad-oil, then grill them over or in front of a clear fire for about 8 or 10 minutes, turning them 3 or 4 times. Season the cutlets lightly with salt and pepper, cover the end of each bone with a cutlet-frill, arrange neatly in a circle on a border of mashed potato, serve with peas (about $\frac{1}{2}$ pint) in the centre, and pour $\frac{1}{2}$ pint of good gravy of demi-glacé sauce round.

LAMB, ROAST

Lamb when roasting, requires more attention than any other kind of meat. No part of it must be underdone, and to secure this result without drying and hardening the thinner portions to an undesirable degree, much care is necessary. The intense heat to which all meat must first be subjected for a few minutes is applied for too short a time to affect the colour of a joint kept constantly in motion, and the subsequent browning and over-cooking of any part may be obviated by covering the meat with 2 or 3 folds of well-greased paper and by frequent basting. The amount of heat applied to any part may be regulated by raising or lowering the

joint on the spit, and the rate of cooking by increasing or decreasing the distance between the joint and the fire.

LAMB, STEWED

Saw the long bones of 3 or 4 lbs. of loin, neck or breast of lamb across and either skewer or bind the meat into a compact form. Heat 2 oz. of butter in a large stewpan, add $\frac{1}{2}$ teaspoonful of pepper, 6 mint leaves, and the juice of $\frac{1}{4}$ a lemon, put in the meat, cover closely, and cook very gently for about 1 hour, turning the meat 2 or 3 times, in order to brown the entire surface. Serve Soubise sauce (about $\frac{1}{2}$ pint) separately; or, instead of this sauce, add $\frac{1}{2}$ pint of stock mixed with 1 dessertspoonful of flour to the butter, etc., in the stewpan, boil for 2 or 3 minutes, season to taste, improve the colour, if necessary, by adding a few drops of liquid caramel. Dish up, and serve hot.

LEEKS, BOILED

Trim off the roots, the outer leaves, and the green ends of 12 young leeks, and cut the stalks into 2-inch lengths. Have ready a saucepan of boiling water, add a tablespoonful of vinegar and a dessertspoonful of salt, put in the leeks, previously tied in bundles, and boil gently for about 40 minutes, or until they are perfectly tender. Drain well, serve on toast, and pour white sauce over them.

LEMONADE

Strain the juice of 1 lemon into $\frac{1}{2}$ pint of cold water, sweeten to taste, with castor sugar. Then stir in $\frac{1}{2}$ of a teaspoonful of carbonate of soda and drink while the mixture is in an effervescing state.

LEMON PUDDING, BAKED

Cream 3 oz. of sugar and the yolks of 3 eggs together until thick and white, add the juice of 2 lemons, the rinds grated, 1 gill of cream or milk, 2 oz. of cakecrumbs, and lastly the stiffly-whisked whites of the eggs. Have ready a pie-dish with the edges lined and decorated with paste, pour in the preparation, and bake in a moderate oven for about $\frac{1}{2}$ an hour, or until set.

Sprinkle the surface liberally with castor sugar, and serve hot.

LENTILS, BOILED

Soak 1 pint of lentils overnight in plenty of water, drain, cover them with boiling water, add a little salt, and boil gently until soft, but not broken. Fry 1 finely-chopped onion in 1 oz. of butter until lightly browned, add $\frac{1}{2}$ oz. of flour, and when it has cooked for 2 or 3 minutes put in $\frac{1}{2}$ pint of stock or milk, and stir the mixture until it boils. Strain and add the lentils, season to taste, cook gently for a few minutes, then serve. Or soak, boil, and drain the lentils as directed above, season to taste with salt and pepper, stir in a little butter, then serve.

LENTIL SOUP

Wash $\frac{1}{2}$ pint of brown lentils, soak them for 24 hours, and when ready to use drain well. Melt 1 oz. of butter in a stewpan, put in 1 sliced onion, carrot, 2 strips of celery, a bouquet-garni (parsley, thyme, bay-leaf), and lentils, cover closely, and let them steam in the butter for 15 or 20 minutes. Add 3 pints of second stock or water, salt and pepper, and cook gently for 2 hours, or until tender, then rub through a fine sieve. Return to the saucepan, add 1 pint of milk, and bring to the boil. Mix 1 tablespoonful of flour with a little milk or stock, add it to the soup, stir, and simmer for 5 minutes. Season to taste, add 2 tablespoonfuls of cream, and serve. Croustons of fried or toasted bread should be handed separately.

LOBSTERS, TO BOIL

Buy the lobsters alive, and choose those that are heavy and full of motion, which is an indication of their freshness. When the shell is encrusted, it is a sign they are old; medium-sized lobsters are the best. Have ready a stewpan of boiling water, salted in the proportion of $\frac{1}{2}$ lb. to every gallon of water, wash the lobsters well and put them in—life is thus immediately destroyed—and keep them boiling quickly from 20 to 45 minutes, according to their size, and do not forget to skim well. If boiled too long, the meat becomes thready,

and if not done enough the spawn is not red. Rub the shells over with a little butter or sweet oil, which must be wiped off again.

MACARONI PUDDING (SAVOURY).

Parboil 6 oz. of macaroni, and with it line a pint basin, previously buttered. Soak $\frac{1}{2}$ lb. of bread in cold water, squeeze it dry, and add 1 teaspoonful of parsley, $\frac{1}{2}$ a teaspoonful of mixed herbs, lemon-rind, spice, pepper and salt, 3 oz. of butter, 1 egg, and any macaroni that may be over, cut into pieces. Fill the basin and press it down. Cover it with buttered paper, and steam for $1\frac{1}{2}$ hours. Serve hot, with white or brown sauce.

MACARONI PUDDING (SUET)

Break 2 oz. of macaroni into small pieces, and cook in a sauce-pan with fast boiling water for about 20 minutes, then drain off the water and cook till nearly tender in $\frac{1}{2}$ a pint of milk. Now add one beaten egg mixed with 1 oz. of castor sugar, then pour the mixture into a buttered pie-dish, and bake in a quick oven for about 10 minutes.

MACKEREL, BAKED

Clean 2 mackerel, of medium size, take out the roes, put in some forcemeat and sew up the opening. Put them with the roes into a baking-dish, add 1 oz. of butter or sweet dripping, dredge with flour, sprinkle well with salt and pepper, and bake from 30 to 40 minutes, basting occasionally. Serve with parsley sauce or melted butter sharpened by the addition of lemon-juice, and finely-chopped parsley.

MACKEREL, BOILED, WITH PARSLEY SAUCE

Remove the roes, wash 2 mackerel, put them into the fish-kettle, with just sufficient hot water to cover them, and add salt to taste. Bring the water gently to near boiling point, then draw the kettle aside, and cook very gently for about 10 minutes. If cooked too quickly, or too long, the skin is liable to crack and spoil the appearance of the fish. It is a sure

indication that the fish is sufficiently cooked when the skin becomes loose from the flesh. Drain well, place the mackerel on a hot dish, pour over them a little parsley sauce, and serve the remainder separately in a tureen. Fennel and anchovy sauces may also be served with boiled mackerel.

MACKEREL, PICKLED

Clean and wash 2 or 3 mackerel and take out the roes. Place the mackerel in an earthenware baking-dish with the roes (mackerel are best in that part of the season when the roes are not full grown), sprinkle them well with salt and pepper, add 2 bay-leaves, allspice, 12 peppercorns, $\frac{1}{2}$ pint of vinegar, and about $\frac{1}{2}$ pint of water, cover with a greased paper, and bake in a cool oven for nearly 1 hour. Let them remain in the liquor until required.

MAÎTRE D'HÔTEL, OR PARSLEY SAUCE

Put $\frac{1}{2}$ pint of good white sauce in a saucepan with a little water, stir until it boils, reduce well, then add 2 oz. of butter a little at a time, and stir well. Strain the sauce into another saucepan, add 1 teaspoonful of finely-chopped parsley, the juice of $\frac{1}{2}$ a lemon, and seasoning, re-heat and serve.

MARMALADE PUDDING

Mix 6 oz. of finely-chopped beef suet, 8 oz. of bread-crumbs, $\frac{1}{2}$ a teaspoonful of baking-powder, and a pinch of salt well together. Beat 2 eggs, add 4 oz. of orange marmalade, and when well mixed stir them into the dry ingredients. Beat the mixture lightly, and if at all stiff, add a little milk. Turn into a buttered basin or mould, cover with greased paper, and steam from 2 $\frac{1}{2}$ to 2 $\frac{3}{4}$ hours. Serve with marmalade, cornflour, or other suitable sauce.

MELTED BUTTER.

Melt 1 oz. of butter in a saucepan, stir in $\frac{1}{2}$ oz. of flour and cook for 2 or 3 minutes. Half a pint of water now to be added must not be quite boiling, but it may be hot, and as the sauce has to be constantly stirred until it boils to incorporate the substances contained in it, considerable time is

saved by adding warm or hot water, instead of cold. Bring to the boil, and simmer for a few minutes. Season and use as required.

MILK SCONES

Sift $\frac{1}{2}$ lb. of flour, 1 level teaspoonful of cream of tartar, and $\frac{1}{2}$ level teaspoonful of carbonate of soda together. Rub $1\frac{1}{2}$ oz. of butter into the flour, add 1 teaspoonful of castor sugar, and mix to a paste with $\frac{1}{2}$ pint of milk. Roll out, and cut out with a small round cutter or a wineglass. Bake in a moderately heated oven for about 15 minutes.

MINCEMEAT

Pare 2 lemons thinly, simmer the rinds in a little water until perfectly tender, then pound them or rub them through a fine sieve. Mix well together 1 lb. of finely-chopped suet, 1 lb. of currants, washed and picked, 1 lb. of raisins, stoned and quartered, 1 lb. of chopped apples, 1 lb. of castor sugar, $\frac{1}{2}$ lb. of sultanas, $\frac{1}{2}$ lb. of shredded mixed candied peel, $\frac{1}{2}$ gill of brandy, $\frac{1}{2}$ a saltspoonful each of nutmeg, mace and cinnamon, press into a jar, cover closely, and keep in a cool, dry place for at least 1 month.

MINCE PIES

When the puff paste has had the necessary number of turns, roll it out to about a $\frac{1}{4}$ of an inch in thickness, and line some large-size patty pans with it. Fill with mincemeat, cover with paste, brush over lightly with cold water, and dredge with castor sugar. Bake in a moderately hot oven from 25 to 30 minutes, and serve either hot or cold.

MINT SAUCE

The mint should be young and fresh-gathered. Wash it free from grit, pick the leaves from the stalks, mince them very fine, put about 4 dessertspoonfuls into a tureen, add 2 dessertspoonfuls of sugar, $\frac{1}{2}$ pint of vinegar, and stir until the former is dissolved. This sauce is better by being made 2 or 3 hours before it is required for the table, as the vinegar then becomes impregnated with the flavour of the mint. Good white wine vinegar is preferable

to ordinary malt vinegar. Sugar should be added with discretion until the required degree of sweetness is obtained.

MUSHROOMS, BROILED OR GRILLED

Carefully peel some cup mushrooms, cut off a portion of the stalk, and season with salt. Broil them over a clear fire, turning them once, and arrange them on a very hot dish. Put a small piece of butter on each mushroom, season with pepper and salt, and squeeze over them a few drops of lemon-juice.

MUSHROOMS, STEWED

Remove the skins from 1 lb. of button mushrooms and cut off the ends of the stalks. Melt 2 oz. of butter in a stewpan, put in the mushrooms and the juice of $\frac{1}{2}$ a lemon, season with salt and pepper, cover closely, and cook gently for about $\frac{1}{2}$ of an hour, shaking the pan occasionally. Mix 1 dessertspoonful of flour and $\frac{1}{2}$ pint of cream or milk smoothly together, pour the mixture into the stewpan, stir until the contents boil, simmer for 10 minutes to cook the flour, then, if the mushrooms are tender, season to taste, and serve.

MUSSELS

Brush the shells thoroughly, and wash 1 quart of mussels in several waters. Put them into an iron saucepan without water (or into a steamer). Sprinkle with a little salt, spread a clean wet cloth over them, cover, and let them cook in the steam until the shells open a little. Take them out of the shells, and strain the liquor into a basin. Carefully remove the little weed which is found under the black tongue. Melt 1 oz. of butter, add $\frac{1}{2}$ oz. of flour, and cook for 3 or 4 minutes, then pour in the mussel liquor, and stir until it boils. Cool slightly, then add the yolks of 2 eggs, 1 tablespoonful of vinegar, and 1 teaspoonful of chopped parsley, season to taste, and stir by the side of the fire until the eggs thicken. Put in the mussels to re-heat, and serve in the sauce.

MUSTARD, TO MIX

Mustard is usually prepared for use

by simply mixing it smoothly with cold water, and it is generally considered of right consistency when sufficiently moist to drop slowly from the spoon. A saltspoonful of salt added to each tablespoonful of mustard not only improves the flavour, but it also prevents the mustard from becoming so quickly dry. If desired, the pungency may be greatly increased by mixing a little chilli vinegar and cayenne with the mustard, the flavour of the whole being softened by the addition of a good pinch of sugar. On the other hand, when a very mild flavour of mustard is liked, it may be obtained by using cream or milk, preferably the former, instead of water. In any case it should be mixed in small quantities, as it quickly loses its flavour and fresh appearance.

MUTTON, BOILED

The leg, neck, and breast are the parts usually selected for boiling. When intended for this purpose, the meat should not be allowed to hang many days, for the least taint spoils the flavour of boiled mutton. Too often the natural flavour of a boiled joint is overpowered by the flavour of the vegetables with which it is cooked. To avoid this, only the quantity sufficient to impart a slight flavour should be cooked in the liquor, and the remainder boiled separately. The flavour of the meat is thus preserved, and the vegetables are a better colour when cooked more quickly than is possible if their rate of cooking is adapted to the meat. The side of the joint intended to be dished upwards should be put downwards in the boiling pot, for however gentle the ebullition of the water may be, its action somewhat spoils the upper surface of the meat. Moreover, any scum that is not removed during the process of cooking is apt to fall on the upper surface of the meat, and impair its appearance. The time allowed for boiling is from 20 to 25 minutes for each lb. of meat, according to the thickness of the joint.

MUTTON, BREAST OF, GRILLED OR BROILED

Divide the breast into pieces

convenient for serving, and trim away some of the fat. Grill slowly over or in front of a clear fire, in order that the meat may be thoroughly cooked, turning frequently meanwhile, and sprinkling liberally with salt and pepper. Serve with tomato, piquante, or other suitable sauce separately.

MUTTON BROTH

Remove all the fat and cut $1\frac{1}{2}$ lbs. of neck of mutton into small pieces. Put 1 quart of cold water into a stewpan, add the meat, bones, and a little salt, bring slowly to the boil, and skim well. If pearl-barley is used, blanch it by putting it into cold water and bringing to the boil. Cut 1 small carrot, $\frac{1}{2}$ a turnip, 1 onion and 1 strip of celery into rather small dice or cubes, and add them to the broth when it has cooked for 1 hour; add also 1 tablespoonful of pearl-barley or rice. When the broth has simmered gently for 3 hours, strain and return to the saucepan. Carefully remove any fragments of bone from the meat, vegetables, and pearl-barley, and return. When boiling, sprinkle in 1 teaspoonful of finely-chopped parsley. Season to taste and serve.

MUTTON CHOPS, BROILED OR GRILLED

Divide the loin of mutton into chops, trim away any superfluous fat, curl the end round, and fasten securely with a small skewer. Brush over with salad-oil or oiled butter, broil over or in front of a clear fire, turning 3 or 4 times, then season with salt and pepper, and serve.

MUTTON, CURRIED.

Remove all skin and fat from 1 lb. of cooked mutton, and cut it into small, thin slices. Make $\frac{1}{2}$ pint of curry sauce, let the meat remain in it for at least $\frac{1}{2}$ an hour, then serve with well-boiled rice.

MUTTON, ROAST

When possible, mutton should be roasted before the fire, for this method of cooking imparts a more delicate and better flavour to the meat. Whatever the joint, it should be well basted with hot fat before setting the roasting-jack

in motion; and for 10 or 15 minutes it must be placed quite close to a clear, bright fire, in order to quickly form a hard surface layer. The meat revolves too quickly for it to become over-browned in a short space of time. During the first few minutes the joint should be almost constantly basted, and afterwards at short intervals. The time required for roasting depends principally upon the condition of the fire, and the form and size of the joint.

MUTTON, SCRAG OF, TO COOK

Wash the extreme end of the scrag end of a neck in salted, warm water, saw the rib bones across, and remove the short ends. Place 2 sliced onions, 2 sliced carrots, $\frac{1}{2}$ sliced turnip in a stewpan just large enough to hold the meat, lay the meat on the top, cover with slices of bacon, and add a bouquet-garni (parsley, thyme, bay-leaf) 10 peppercorns, and either stock or water to nearly cover the vegetables. Put on a close-fitting lid, cook gently for about $1\frac{1}{2}$ hours, then take out the meat, strain it, and coat with egg and breadcrumbs. Bake in a quick oven until nicely browned. Serve with brown sauce, or any sauce of which the stock used in cooking the meat may form the base.

NORFOLK DUMPLINGS

Let the bread dough rise to the same degree as when making bread, then roll it into balls about the size of a very small egg. Have ready a saucepan of slightly-salted, rapidly-boiling water, cook the dumplings for 6 or 7 minutes, and serve at once. They may be served with jam, treacle, butter and sugar, vinegar and sugar, or good gravy.

OATMEAL PORRIDGE

There are several ways of making porridge. The one generally adopted—although by no means the best—is to sprinkle the oatmeal into boiling, slightly salted water, with the left hand, meanwhile stirring briskly with a wooden spoon or wooden spatula. When the porridge is thick enough, the stewpan is drawn to the side of the fire, and the contents, slowly cooked from 20 to 30 minutes, being occasionally

stirred to prevent it sticking to the bottom of the pan. A better method is to soak 4 oz. of oatmeal in $1\frac{1}{2}$ pints of cold water overnight, and in the morning strain the water into a stewpan, and when boiling add the oatmeal, and salt to taste. Twenty minutes gentle simmering will sufficiently cook it, and it must be well stirred during the process. Probably the best plan of all is to use a water-jacketed saucepan for making porridge, for it is always desirable to have oatmeal thoroughly cooked, and as the water in the outer pan obviates the necessity of frequent stirring, the porridge may, with little trouble, be cooked for 2 or 3 hours on the previous day, and re-heated when required; a pinch of salt should always be added to the porridge. There are three varieties of oatmeal—coarse, medium, fine; any kind may be used for making porridge, but coarse oatmeal is generally preferred.

OMELET, SAVOURY

Beat 4 eggs until light, add 1 tablespoonful of cream or milk, $\frac{1}{2}$ a teaspoonful of finely-chopped parsley, $\frac{1}{2}$ teaspoonful of finely-chopped shallot or onion, and a pinch of mixed herbs, and season with salt and pepper. Melt $1\frac{1}{2}$ oz. of butter in an omelet pan, pour in the mixture, stir with a fork until the eggs are on the point of setting; then, with a spoon, draw it quickly opposite the handle of the pan in the shape of a cushion or half-moon. Turn over on to a hot dish, and serve as quickly as possible.

ONION SOUP

Cut $\frac{1}{2}$ a turnip and 2 strips of celery into small pieces, peel 3 Spanish onions, put them into cold water, bring to the boil, cook for 10 minutes, then drain and chop coarsely. Put 2 pints of boiling water into the stewpan, add the onions, celery, turnip, bay-leaf, a blade of mace, salt, and pepper, and simmer until tender (about 1 hour). Rub through a fine sieve, return to the saucepan, add $1\frac{1}{2}$ pints of milk, and when boiling stir in 1 oz. of flour and 1 oz. of butter, previously kneaded together. Simmer for a few minutes to cook the flour, then let the soup

cool slightly. Beat the yolks of 2 eggs with a little milk, pour them into the soup, and stir until they thicken. Season, and serve with fried or toasted croûtons of bread.

ONIONS, SPANISH, BAKED

Put 4 or 5 Spanish onions, with their skins on, into a saucepan of boiling water, slightly salted, and let them boil quickly for 1 hour. Then take them out, wipe them thoroughly, wrap each one in a piece of buttered paper, and bake them in a moderate oven for 2 hours, or longer, should the onions be very large. They may be served in their skins, and eaten with a piece of cold butter and a seasoning of pepper and salt; or they may be peeled, and a good brown gravy poured over them.

ONIONS, SPANISH, BOILED

Peel some onions, put them into cold water, bring to the boil, and strain. Have ready a saucepan of boiling water, add to it a teaspoonful of salt, put in the onions, and boil gently from $1\frac{1}{2}$ to 2 hours, according to size. Or they may be steamed, in which case about $\frac{1}{2}$ an hour longer must be allowed. Serve with the white sauce poured over them.

OX-TAIL SOUP

Cut an ox-tail into small joints, put it into a stewpan, cover with cold water, boil up, and strain. Dry the pieces of ox-tail, roll them in flour, put them with 2 oz. of lean ham or bacon, (cut into dices or cubes) and 2 sliced onions, 2 sliced carrots, 1 sliced turnip and 2 strips of celery, and 2 oz. of butter into the stewpan and fry until brown. Then add 2 quarts of second stock or water, 12 peppercorns, 2 cloves and salt; boil and skim well. Put on the lid and cook very gently for about 4 hours. Strain, remove the fat, return to the stewpan, and when the soup boils add 1 glass of sherry and 1 tablespoonful of corn-flour smoothly mixed together, stir, and cook for a few minutes. Serve the smaller pieces of the tail in the soup, the remainder may be re-heated in a good brown sauce, and served as an entrée.

PANCAKES (FRENCH).

Heat $\frac{1}{2}$ pint of milk in a stewpan. Cream 2 oz. of butter and 2 oz. of castor sugar together until smooth, beat in 2 eggs, and stir in 2 oz. of flour lightly. Now add the warm milk, which will slightly curdle the mixture, beat well, then cover and let it stand for 1 hour. Have ready 6 buttered plates or large saucers, put an equal quantity of batter into each, bake quickly until the batter rises, then more slowly for about 10 minutes. Spread 5 of them with jam, which should be warm, place them on the top of each other, cover them with the plain pancake, and dredge well with castor sugar. Serve quickly.

PARSLEY SAUCE (for Meat, Etc.)

Melt 1 oz. of butter in a saucepan, stir in 1 oz. of flour, cook for 2 or 3 minutes, then add $\frac{1}{2}$ pint of the liquor in which the meat has been cooked and $\frac{1}{2}$ pint of milk and stir until it boils. Simmer for a few minutes, season to taste, add 1 tablespoonful of chopped parsley, and use as required. If the parsley is allowed to boil in the sauce it will lose some of its green colour.

PARSLEY SAUCE (for Fish)

Melt 1 oz. of butter in a saucepan, stir in $\frac{1}{2}$ oz. of flour, cook for 2 or 3 minutes, then add $\frac{1}{2}$ pint of fish stock or water, and stir until it boils; simmer for a few minutes, then season to taste, add 1 tablespoonful of finely-chopped parsley, and serve. If the parsley is allowed to boil in the sauce it will lose some of its green colour.

PARSNIPS, BOILED

Wash the parsnips, scrape them thoroughly, and with the point of the knife remove any black specks about them, and should they be very large, cut the thick part into quarters. Put them into a saucepan of boiling water, salted in the proportion of 1 heaped tablespoonful to each $\frac{1}{2}$ gallon of water, boil them rapidly until tender, which may be ascertained by piercing them with a fork or skewer, take them up, drain them, and serve in a vegetable-dish. This vegetable is usually served with salt fish, boiled pork, or boiled

beef; when sent to table with the latter, a few should be placed alternately with carrots round the dish, as a garnish.

PASTE, FLAKY (for Pies, Tarts and Tartlets)

Sieve 12 oz. of flour into a basin, and rub in lightly 3 oz. of butter. Add about $\frac{1}{2}$ pint of water and mix into a smooth paste, more or less moist, according to the consistency of the butter, with which it must agree in this respect; roll it out into a long, narrow strip. Divide 6 ozs. butter into 3 equal portions; put one portion on the paste in small pieces, dredge lightly with flour, fold it evenly in three, turn it round so as to have the folded edges to the right and left when rolling, press the edges lightly with the rolling pin, to prevent the air escaping, and roll out as before. Repeat this process with the other portions of butter. The pastry may be used at once, but it will be lighter if allowed to stand for one hour in a cool place before being used. In making-up, handle as lightly, and roll as evenly as possible. Bake in a hot oven, and avoid opening the oven door until the pastry has risen and become partially baked.

PASTE, PUFF

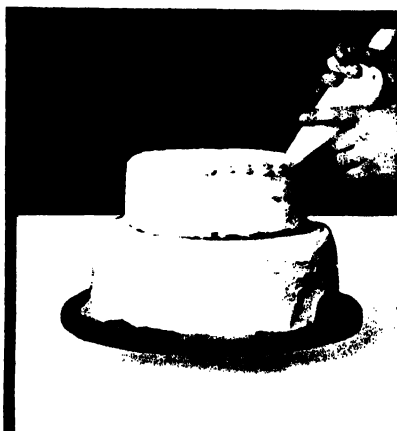
Wash and squeeze 1 lb. of butter in cold water, dry well in a floured cloth, shape into a square about the size of a slice of sandwich bread, and keep in a cool place while the paste is being prepared. Sieve 1 lb. of flour on to a marble slab or board, make a well in the centre, put in 1 teaspoonful of lemon-juice, and add water gradually until a smooth paste is formed. The condition of the butter determines the consistency; when soft, the paste must be equally so. Knead the paste until smooth, then roll it out into a strip a little wider than the butter, and rather more than twice its length. Place the butter on one half of the paste, fold the other half over, enclosing the butter entirely, and press the edges together with a rolling-pin. Let it remain in a cool place for about 15 minutes, then roll out to about three times the original length, but keeping

HOW TO MAKE PASTRY.



Sieve the flour, add water, and mix with the fingers; roll out and place the butter in the centre; fold the ends over, making an envelope for the butter; roll out; method of flaking edge of pies; method of cutting out tartlets or bouchées; tartlets or bouchées for baking.

PIPING OR FANCY CAKE ICING.



Make an ordinary grocer's paper bag, place one of the piping funnels at the bottom, pour the prepared sugar into the bag, and tear the paper off the point of it. Hold the bag in the right hand, and with the fingers of the left squeeze the sugar through the funnel. The piping tubes have teeth, and patterns of piping vary according to the "outlet."

the width the same, and fold exactly in three. Turn the paste round so that the folded edges are on the right and left, roll and fold again, and put aside for 15 minutes. Repeat this until the paste has been rolled out six times. The rolling should be done as evenly as possible, and the paste kept in a long, narrow shape which, when folded, forms a square. Each time the paste is rolled out, it may be well sprinkled with flour, but it must be evenly distributed with a paste-brush, and all the loose flour carefully brushed off before beginning to roll. When the paste has had its sixth roll, it is ready for use; it should be baked in a hot oven, and until the paste has risen and become partially baked, the oven door should not be opened, because a current of cold air may cause the flakes to collapse on one side.

PASTE, RICH SHORT CRUST

Rub 10 oz. of butter lightly into 1 lb. of flour, add 1 teaspoonful of baking-powder, 1 level teaspoonful of castor sugar, yolks of 2 eggs, and a little water if necessary, but this paste must be rather stiff, and when the butter is soft or the paste is being mixed in a warm place, only a few drops of water may be required. Roll out thinly, and use at once. The crust for fruit tarts should be lightly brushed over with cold water, and dredged with castor sugar before being baked.

PASTE, ROUGH PUFF, OR HALF-PUFF

Sieve 8 oz. of flour on to a paste-board, divide 6 oz. of butter (or equal quantities of butter and lard) into pieces about the size of a small walnut, and mix them lightly with the flour. Make a well in the centre, put in $\frac{1}{2}$ teaspoonful of lemon-juice, salt, and 1 tablespoonful of water, mix lightly, keeping the pieces of butter intact, and add water gradually until a moderately stiff paste is formed. Roll into a long strip, fold it equally in three, turn it round so as to have the folded edges to the right and left, and roll out as before. Repeat until the paste has been rolled out 4 times, then use, or if convenient let it remain

for 1 hour in a cool place before being used.

PASTE, SHORT CRUST, PLAIN

Pass $\frac{1}{2}$ lb. of flour, $\frac{1}{2}$ teaspoonful of salt, and 1 teaspoonful of baking-powder through a sieve into a large basin, then rub in 3 oz. of lard, clarified fat or dripping, add $\frac{1}{2}$ pint of water, and work into a smooth paste with a knife. Roll out to desired shape and thickness, and use at once. When required for fruit tarts, 1 tablespoonful of sugar should be added to the above ingredients.

PEA SOUP

Wash 1 pint of dried split peas and soak them for 12 hours in water. Put them into a stewpan with the bones (if any) and 2 quarts of stock or water (if water is used, ham or beef bones, either cooked or uncooked, will improve the soup) and bring to the boil. Slice 2 onions, 2 carrots, 1 small turnip and 2 strips of celery and add them to the stock when it boils, and simmer for at least 3 hours. Then rub through a wire sieve, return to the saucepan, add 1 oz. of flour mixed smoothly with a little water, and boil. When the purée is thoroughly incorporated with the soup, season to taste, and serve. 1 dessertspoonful of dried mint should be placed in the tureen and the soup poured on to it.

PEAS, GREEN, BOILED

Shell the peas, put them into boiling water, add a little salt and a sprig of mint, and boil, with the saucepan uncovered, from 10 to 25 minutes, according to age and variety. Drain well, put them into a hot vegetable dish, season with pepper, add a small piece of butter, and serve.

PEAS, TINNED, TO DRESS

Strain the liquor from 1 pint of preserved peas, and wash and drain them well. Have ready a saucepan of boiling water, add 2 or 3 sprigs of mint, and when they have infused for 5 minutes put in the peas, together with a little salt and a good pinch of sugar. Let the peas remain in the water for a few minutes, then drain them well, sprinkle them with pepper, and add a little cold butter. When

fresh mint is not procurable, serve the peas sprinkled with powdered mint.

PEASE PUDDING

Put $1\frac{1}{2}$ pints of split peas to soak overnight in water, and float off any that may be worm-eaten or discoloured. Tie them loosely in a clean cloth, leaving a little room for them to swell, and put them on to boil in cold rain-water, allowing about 2 hours after the water has simmered up. When the peas are tender, well rub them through a colander with a wooden spoon, and add 2 oz. of butter, eggs, pepper, and salt. Beat all well together for a few minutes, until the ingredients are well incorporated, then tie them tightly in a floured cloth, and boil the pudding for another hour. Untie the pudding and turn it on to the dish, and serve very hot.

PIG'S FRY

Wash the pig's fry (which consists of the heart, lights, liver and sweetbread) well, cover it with water, add a little salt, and cook gently for $\frac{1}{2}$ an hour. Drain and dry well, cut into thin slices, and coat them lightly with flour seasoned with salt, pepper, and a little sage. Fry in hot fat until nicely browned, then remove and keep hot. Sprinkle a little flour on the bottom of the frying-pan, let it brown, then pour in a little boiling water, and add seasoning to taste. Boil up, strain, and serve round the fry, or separately.

PLAICE, BAKED

Mix 2 tablespoonfuls of white breadcrumbs, 1 tablespoonful of finely-chopped suet, 1 dessertspoonful of finely-chopped parsley, $\frac{1}{2}$ teaspoonful of mixed herbs, and a pinch of nutmeg together, season well with salt and pepper, add $\frac{1}{2}$ an egg, and enough milk to thoroughly moisten the whole. Make an incision down the centre of a medium-sized plaice as for filleting, raise the flesh each side as far as possible, and fill with the forcemeat. Instead of drawing the sides of the fish close together, fill up the gap with forcemeat, and, with a knife, flatten the surface to the level of the fish. Brush over with the remaining half of the egg, cover

lightly with pale browned breadcrumbs, place a few small pieces of butter on the top, and bake from 20 to 30 minutes in a moderate oven. Serve with a suitable sauce.

PLAICE, FRIED

Wash, dry, and fillet 1 medium-sized plaice, and cut it into pieces convenient for serving. Season a good tablespoonful of flour rather highly with salt and pepper, and in it dip each piece of fish, then brush over with egg, cover with breadcrumbs, and fry in hot fat until nicely browned. Garnish with fried parsley, and serve with anchovy, shrimp, or melted butter sauce.

PLUM PUDDING

Mix well together 6 oz. of flour, 6 oz. of breadcrumbs, 6 oz. of finely-chopped suet, 6 oz. of moist sugar, 6 oz. of raisins, halved and stoned, 6 oz. of currants, washed and dried, 1 heaped teaspoonful of baking-powder, 1 saltspoonful of salt, $\frac{1}{2}$ saltspoonful of ground mace, and $\frac{1}{2}$ saltspoonful of grated nutmeg, add sufficient milk to mix into a very stiff batter, and turn into a well-greased basin. Boil for 6 hours, or steam for at least 7 hours.

PLUM PUDDING, CHRISTMAS

Mix together 8 oz. of moist sugar, 8 oz. of fine-chopped suet, 8 oz. of sultanas cleaned, 8 oz. of raisins, halved and stoned, 8 oz. of currants, washed and dried, 4 oz. of shredded mixed candied peel, 4 oz. of flour, 4 oz. of breadcrumbs, 2 oz. of almonds, blanched and shredded, the grated rind of 1 lemon, a saltspoonful of nutmeg grated, $\frac{1}{2}$ a teaspoonful of salt, stir in 4 well-beaten eggs, $\frac{1}{2}$ pint of milk, and 1 wineglassful of brandy, turn the mixture into two well-buttered basins, steam from 5 to 6 hours.

PORK AND BEANS

Put a shoulder of young pork pickled into a stewpan containing sufficient warm water to cover it, bring to the boil, add 1 onion, 1 carrot, $\frac{1}{2}$ of a turnip and 10 peppercorns, and boil gently for about 2 hours. Half an hour before the pork will be ready throw some beans into salted boiling water, boil gently from 25 to 30 minutes, then drain well,

and pour over them some parsley sauce. Serve the pork and beans on separate dishes.

PORK, BAKED.

Score a leg or loin of pork in narrow lines. Slice 2 onions, 2 carrots, 1 small turnip, and 2 strips of celery, place them in a baking-tin, sprinkle with salt and pepper, and add 1 teaspoonful of mixed herbs and 2 or 3 oz. of dripping. Lay the meat on the top, and cook in a moderate oven for about 2½ hours, basting frequently. Half an hour before serving, peel two dozen button onions, and fry them brown in hot butter. Serve the meat on a hot dish, garnish with the onions, and send ½ pint of gravy to table in a sauceboat. If necessary, the gravy can be made from the sediment in the meat tin.

PORK, LEG OF, ROASTED

Remove the bones down to the knuckle bone from a leg of pork, break them into smaller pieces, and simmer them for gravy. Make some sage and onion stuffing as directed, press it lightly inside the leg, and secure the opening. Score the skin in narrow strips, brush over with salad-oil, and either roast it before a clear fire or bake it in a moderate oven. Serve the gravy and apple sauce in sauceboats.

PORK PIE

Cut 1½ lb. of lean pork into dice, and season it well with salt and pepper. Place the bones in a stewpan, add 1 small onion, salt, and cayenne pepper, cover with cold water, and simmer for at least 2 hours to extract the gelatine, in order that the gravy, when cold, may be a firm jelly. Put 1 lb. of household flour into a large basin, and add to it a good pinch of salt. Boil 6 oz. of lard and 7½ gills of water together for 5 minutes, then add it to the flour, stirring it thoroughly until cool enough to be kneaded. Knead until smooth, cover with a cloth, and let the basin stand near the fire for about ½ an hour. Throughout the whole process the paste must be kept warm, otherwise moulding may be extremely difficult; but overheating must also be avoided, for when the paste is too soft it is unable to support

its own weight. At the end of this time, re-knead the paste, put aside about ¼ for the lid, and raise the remainder into a round or oval form, as may be preferred. If an inexperienced worker finds any difficulty in raising the pie by hand alone, a small jar may be placed in the centre of the paste, and the paste moulded over it. When the lower part of the pie has been raised to the necessary shape and thinness, subsequent work may be made much easier by putting in some of the meat, and pressing it firmly down to support the lower part of the pie. Before adding the lid, moisten the meat with 2 or 3 tablespoonfuls of the prepared seasoned gravy; the remainder is reheated, and added after the pie is baked and still hot. Three or four folds of greased paper should be pinned round the pie to preserve its shape, and prevent it becoming too brown. The pie should be baked for at least 2 hours in a moderate oven, and its appearance is greatly improved by brushing it over with yolk of egg when about ¾ baked. Slices of hard-boiled egg are often added with the meat.

PORTERHOUSE STEAK

Brush the steak (which should be about 1½ inches in thickness) over on both sides with salad-oil or warm butter, sprinkle with pepper, and when convenient let it remain for 1 hour before cooking. Grill over a clear fire, and serve with maître d'hôtel butter, groups of button onions fried in butter and glazed, small stuffed tomatoes, horseradish sauce, or suitable accompaniment.

POTATOES, BAKED

Choose large potatoes, as much of a size as possible; wash them in lukewarm water, and scrub them well, for the brown skin of a baked potato is by many persons considered the better part of it. Put them in a moderate oven, and bake them for about 2 hours, turning them 3 or 4 times while they are cooking. Serve them in a napkin immediately they are done, for if they are kept a long time in the oven they will have a shrivelled appearance.

NOTE.—Potatoes may also be roasted before the fire in an American oven,

but when thus cooked they must be done very slowly. Another way is to peel the potatoes and place them with roast or baked meat when half done, and then bake them in the oven.

POTATO CHIPS

Peel the potatoes, slice them thinly, wash them well in cold water, then drain and dry thoroughly. Fry them in a wire basket in very hot fat until sufficiently cooked, then remove them and re-heat the fat. Wait until the blue vapour arises from the fat, then replace the basket, and fry until the potatoes become crisp and lightly browned. Drain well, sprinkle with salt, and serve.

POTATOES, BOILED

Choose potatoes of equal size, scrub them, peel them thinly, wash them well in clean cold water, but do not let them remain in it for more than 10 minutes. Put them into a saucepan with sufficient cold water to cover them, add a teaspoonful of salt to each quart of water, and boil gently from 20 to 40 minutes, according to age and size. Ascertain when they are done by trying one with a skewer: if soft, drain off the water, put the saucepan by the side of the fire with the lid tilted, to allow the steam to escape; let them remain for about 10 minutes, then serve.

Opinions are divided as to whether potatoes should be put into cold or boiling water. Those who adopt the former method can give no reason for so doing, save that of its being on old custom, whereas many who have made a scientific study of the culinary treatment of this vegetable assert, and with good reason, that the darker layer of potato immediately under the skin is composed almost entirely of gluten, a substance which, like albumen, when subjected to the temperature of boiling water, at once hardens, forming an impervious layer that prevents the water reaching the inner starchy part of the potato. Consequently, the potatoes are more dry and floury than they would otherwise be.

POTATOES, FRIED

Peel and cut the potatoes into thin slices, as nearly the same size as

possible, parboil them, and dry them in a cloth. Make some oil or dripping quite hot in a saucepan, and put in the potatoes, and fry to a nice brown. When they are crisp and done take them up, drain them on paper before the fire, and serve very hot, after sprinkling them with salt. These are delicious with rump-steak, and in France are frequently served as a breakfast dish. The remains of cold potatoes may be sliced and fried by the above recipe, but the slice must be cut a little thicker. For sliced raw potatoes, allow 25 minutes; cooked potatoes, 15 minutes.

POTATOES, STEAMED

Scrub the potatoes clean. With a sharp knife or potato peeler remove a strip of skin about $\frac{1}{4}$ inch wide from the centre of each potato, *cutting from end to end, not from side to side*, and steam in the ordinary way. *The remainder of the skin may be removed* just before serving. This method may be strongly recommended where large quantities of potatoes are required.

POUND CAKE

Shred $\frac{1}{2}$ lb. of peel very finely, taking equal quantities of orange, lemon, and citron. Blanch 2 oz. of sweet almonds, and chop them finely. Sieve $1\frac{1}{2}$ lbs. of flour on to a sheet of paper, and add the peel, 1 lb. of currants, and the almonds to it. Put 1 lb. of butter into a clean bowl, and beat it up to a light cream with the hand, then add 1 lb. of castor sugar, and give it another good beating; add in 8 eggs, one at a time, beating them after each addition of eggs, and when all these ingredients are in, add the flour and carefully mix, using a little milk, if necessary, to bring the mixture to proper cake-batter consistency. Turn the preparation into round tins, lined at the bottoms and sides with white greased paper. Bake it from $1\frac{1}{2}$ to 2 hours, and let the oven be well heated when the cake is first put in, otherwise the currants will all sink to the bottom. A glass of wine is sometimes added to the mixture, but this is scarcely necessary, as the cake will be found quite rich enough without it. Half these quantities can be used if desired.

PRUNES, STEWED.

Rinse 1 lb. of prunes well in cold water, then place them in a basin, add one pint of cold water, and let them soak for at least 6 hours. When ready, put them into a jar, add 6 oz. of sugar, 1 teaspoonful of lemon-juice, place the jar in a saucepan of boiling water or in a slow oven, and stew gently from 1½ to 2 hours.

RABBIT, BOILED

Wash and truss a rabbit, put it into boiling water; when the water re-boils add 1 onion, 1 carrot, ½ a turnip cut into large pieces, a bouquet-garni (parsley, thyme and bay-leaf), 6 peppercorns, and a teaspoonful of salt. Cook gently from 45 to 60 minutes, according to the age and size of the rabbit. Remove the skewers, serve on a hot dish, coat with onion sauce, and send the remainder to table in a sauceboat. Serve bacon (boiled or fried) on a separate dish, unless small rolls are preferred, when they may be used as garnish. The liquor in which the rabbit is cooked may be served separately as broth, or afterwards converted into a white soup.

RABBIT, CURRIED

Wash the rabbit, dry it thoroughly, and divide it into small joints; slice an apple and 2 onions; heat 3 oz. of butter or fat in a stewpan, fry the rabbit until lightly browned, remove it, put in the onions, and when they have acquired a deep brown colour add 1 tablespoonful of curry-powder and 1 tablespoonful of flour, and fry for 10 minutes. Now put in ½ pint of stock, and when boiling replace the rabbit, add the apple, salt to taste, cover, and simmer gently for 1½ to 1¾ hours. Before serving, add the juice of a lemon and seasoning, if necessary. Pile the rabbit in the centre of a hot dish, strain the sauce over, and serve with 4 to 5 ozs. of cooked rice separately.

RED CURRANT JELLY

Strip the currants from the stalks, put them into a jar placed in a saucepan of boiling water, and simmer gently until the juice is extracted, then strain the juice through a jelly-bag or fine cloth into a preserving pan. To each pint add from ¾ to 1 lb. of preserving

sugar, and boil gently until a little of the jelly, when tested on a cold plate, almost immediately sets. Pour into small pots, cover closely, and keep in a cool, dry place.

RHUBARB WINE

Wipe 25 lb. of rhubarb with a damp cloth, and cut it into short lengths, leaving on the peel. Put it into an earthenware or wooden vessel, crush it thoroughly with a wooden mallet or heavy potato masher, and pour over it 5 gallons of cold water. Let it remain covered for 10 days, stirring it daily; then strain the liquor into another vessel, and to each gallon of liquid add 3 lb. of loaf or good preserving sugar, the juice and very thinly pared rind of 1 lemon, and stir occasionally until the sugar is dissolved. Now put it into a cask, and add 1 oz. of isinglass previously dissolved in a little warm water; cover the bung hole with a folded cloth for 10 days, then bung securely, and allow it to remain undisturbed for 12 months. At the end of this time rack off into bottles, and use.

RICE, CURRIED

Pick, wash, drain, and dry 4 oz. of rice thoroughly. Fry 2 finely-chopped shallots slightly in hot butter, sprinkle in 1 teaspoonful of curry-powder, cook for a few minutes, then add the rice, and cook, and shake well over the fire. Now add a tomato, skinned and cut into dice, a gill of stock, 1 tablespoonful of cream, and a gill of brown sauce, season to taste with salt, pepper, mace, and nutmeg, and cook gently until the rice is tender adding more stock or sauce, if necessary, to prevent the rice becoming too dry. When ready pile on a hot dish, garnish with slices of hard-boiled egg and tufts of watercress, and serve.

RICE PUDDING, BAKED

Pick and wash 3 tablespoonfuls of rice, place it in a greased piedish, add 1½ tablespoonfuls of sugar, 1 pint of milk, and a small pinch of salt. Sprinkle the surface lightly with nutmeg, and bake in a slow oven for about 2 hours. Skim milk, and ½ oz. of butter, or a level tablespoonful of

finely-chopped suet, may be used instead of the new milk.

ROCK CAKES

Rub $\frac{1}{2}$ lb. of butter, 1 lb. of flour, $1\frac{1}{2}$ teaspoonfuls of baking-powder, and $\frac{1}{2}$ lb. of moist sugar well together (the flour should be dried and sifted); mix in 2 eggs, well beaten, 1 teaspoonful of essence of lemon, and $\frac{1}{2}$ gill of milk. Drop the cake-mixture upon a baking-tin as roughly as possible, and bake for $\frac{1}{2}$ of an hour in a rather quick oven. Currants or peel can be added, if liked.

ROLY-POLY PUDDING

Mix 8 oz. of flour, 4 oz. of finely-chopped suet, $\frac{1}{2}$ teaspoonful of baking-powder, and 1 saltspoonful of salt into a stiff paste with a little cold water. Roll it out into a long piece about $\frac{1}{2}$ of an inch thick, spread on some jam to within one inch of the edge, and moisten the sides and far end with water. Roll up lightly, seal the edges, wrap the pudding in a scalded pudding-cloth, and secure the ends with string. Boil from $1\frac{1}{2}$ to 2 hours, or bake in a quick oven for half that length of time.

SAGE AND ONION STUFFING

Cut 2 lbs. of onions into dice, put them into cold water, bring to the boil, cook for 5 minutes, then strain and drain well. Melt 2 oz. of butter in a stewpan, and fry the onions for about 15 minutes without browning them. Add $\frac{1}{2}$ pint of freshly-made bread-crumbs, 1 tablespoonful of finely-chopped sage, and seasoning, mix well, and use as required.

SALMON, BOILED

For the court-bouillon (or highly-seasoned fish stock), allow to each quart of water 1 dessertspoonful of salt, 6 peppercorns, a bouquet-garni (parsley, thyme, bay-leaf).

Put into the fish-kettle just enough water to cover the salmon, and when boiling add 1 small turnip, 1 small onion, $\frac{1}{2}$ a leek, 1 strip of celery, the peppercorns and bouquet-garni, and cook gently for 30 minutes. In the meantime, wash, clean, and scale the fish, and tie it loosely in a piece of muslin. Remove any scum there may

be on the fish stock, then put in the fish and boil gently until sufficiently cooked (the time required depends more on the thickness of the fish than the weight; allow 10 minutes for each lb. when cooking a thick piece, and 7 minutes for the tail end), then drain well, dish on a folded napkin, garnish with parsley, and serve with sliced cucumber and Hollandaise or suitable sauce.

SAUCE FOR SWEET PUDDINGS

Beat $\frac{1}{2}$ lb. of butter to a cream, add $\frac{1}{2}$ lb. of pounded sugar and a wineglassful of brandy or rum; stir until the whole is thoroughly mixed, and serve. This sauce may either be poured round the pudding or served in a tureen.

SAUSAGES, TO FRY

Prick the sausages well with a fork, as this prevents the skins breaking. Put the sausages into a frying-pan containing a little hot fat, and fry gently, turning two or three times, so as to brown them equally. Serve on mashed potato or toasted bread.

SCOTCH BROTH

Cut 3 lbs. of scrag end of mutton into small pieces, put them into a stewpan with 3 quarts of cold water and a teaspoonful of salt, and cook gently for 2 hours. Wash 2 tablespoonfuls of Scotch barley, cut 1 onion, 1 carrot, 1 turnip, a strip of celery, and 1 dessertspoonful of finely-chopped parsley into dice, add them to the broth, and cook for another hour, making 3 hours in all. Strain and return the broth to the stewpan. Cut the meat into small pieces, carefully remove any fragments of bone from the vegetables and barley, and add them to the broth. When quite hot, season to taste, and serve.

SEED CAKE

Put $\frac{1}{2}$ a quartern of dough (which may be got from the baker's) in a basin covered with a cloth, and set it in a warm place to rise. Then spread $\frac{1}{2}$ a quartern out over the board, add $\frac{1}{2}$ lb. of good dripping, $\frac{1}{2}$ an oz. of caraway seeds, 1 egg, and 10 ozs. of moist sugar, and rub together the ingredients until they are thoroughly mixed. Put the mixture into a buttered tin, and bake the cake for 2 hours.

SHEEP'S HEART

Soak the heart for 1 hour in warm water. Cut off the deaf ears, any cartilage or gristle there may be, and the muscular wall dividing the cavities of the heart, and boil them down for gravy. Dry the heart thoroughly, fill the inside with forcemeat, and tie a greased paper round the base to keep in the forcemeat. Heat 2 or 3 oz. of dripping in a baking-tin, baste the heart well, and bake in a moderate oven for about 1½ hours. Gentle cooking and frequent basting are necessary to prevent the heart becoming dry and hard. When done, drain off the fat, but leave the sediment, pour in the prepared gravy, boil up, season to taste, and either pour over the heart or serve separately. The excellence of this dish depends mainly on its being served as hot as possible.

Sheep's hearts may also be stuffed with onion farce.

SKATE, BOILED

Clean and skin the skate, put it into a fish-kettle containing sufficient salted warm water to just cover it, and simmer gently for about 30 minutes, or until the fish separates readily from the bone. Drain well, dish on a folded napkin, and serve with shrimp, lobster or caper sauce.

SKATE, FRIED

Cleanse the skate, lay the fish in a dish with vinegar to cover them, add salt, pepper to taste, 1 sliced onion, 1 small bunch of parsley, and the juice of ½ a lemon, and let the fish remain in this pickle for 1½ hours. Drain them well, flour them or cover them with egg and breadcrumbs, and fry in hot fat until nicely browned. They may be served either with or without sauce. Skate is not good if dressed too fresh, unless it is crimped, and it should, therefore, be kept for a day.

SMELTS, TO BAKE

Wash and dry 12 smelts thoroughly in a cloth, and arrange them nicely in a flat baking-dish. Cover them with fine breadcrumbs, and place over them little pieces of butter. Season and

bake for 15 minutes. Just before serving, add a squeeze of lemon-juice, and garnish with fried parsley and cut lemon.

SOLE, BOILED

Wash and clean the fish, but do not skin it, and cut off the fins. Have ready a fish-kettle with sufficient warm water to cover the fish, add salt to taste, put in the sole, and cook gently from 10 to 12 minutes, according to its size. Drain well, dish on a folded napkin, garnish with parsley and cut lemon, and serve with shrimp, lobster, or plain melted butter sauce.

SOLE, FRIED

Wash and skin a medium-sized sole, cut off the fins, and dry well. Add a liberal seasoning of salt and pepper to a teaspoonful of flour, rub it well into the sole, then brush it over with egg, and cover with fine breadcrumbs. Lift it carefully on to the wire drainer, lower it into the hot oil or fat, and fry until it acquires a pale, golden-brown colour. Soles may also be fried, though less easily, and sometimes less satisfactorily, in a large frying-pan. The oval form is preferable for the purpose; and in frying, care should be taken to first cook the side of the sole intended to be served uppermost, otherwise breadcrumbs that have become detached from the side first fried may adhere to the side next cooked, and spoil its appearance. Drain well on kitchen paper, and serve garnished with fried parsley.

SOLES, TO FILLET

Soles for filleting should be large, as the flesh can be more easily separated from the bones, and there is less waste. To skin any fish, it must be kept wet. It is easier to skin if it is stale.

With flat-fish, begin at the tail, cut the skin across, but do not cut into the flesh, and loosen the skin along the fins on either side with a skewer or finger. Then tear off the skin with the left hand, keeping the thumb of the right hand well pressed over the backbone to prevent the removal of the flesh with the skin. Use a sharp knife for filleting; keep it pressed to the bone, raise the

flesh carefully, remove the fillets, and divide them into pieces suitable for serving. Fillets of a small sole are not divided; they are rolled, tied, or folded according to requirements.

SPINACH, BOILED

Pick off the stalks, and wash 3 lbs. of spinach in cold water until free from grit. Then put it into a saucepan with about a level tablespoonful of salt, and just sufficient water to cover the bottom of the pan. Boil uncovered from 15 to 25 minutes, occasionally pressing it down, and turning it over with a wooden spoon. When done, rub it through a fine sieve; put it into a stew-pan, with 1 oz. of butter, season well with pepper, sprinkle in a tablespoonful of flour, and stir over the fire for 5 or 6 minutes. Serve on a hot dish garnished with croustons of fried or toasted bread.

SPONGE CAKE

Put 8 eggs into one side of the scale, and take the weight of 8 in castor sugar, and the weight of 5 in good, dry flour. Separate the yolks from the whites of the eggs; beat in the former, put them into a saucepan with the sugar, and let them remain over the fire until milk-warm, keeping them well stirred. Then put them into a basin, add the grated rind of 1 lemon, mixed with 1 tablespoonful of brandy, and beat these ingredients well together. Whisk the whites of the eggs to a very stiff froth, stir them into the other ingredients, and beat the cake well for $\frac{1}{2}$ of an hour. Then take out the whisk, sieve in the flour, and mix it lightly with a wooden spoon. Put it into a buttered mould, dusted out with a little finely-sifted sugar and flour, and bake the cake in a quick oven for 1 $\frac{1}{2}$ hours. Care must be taken that it is put into the oven immediately, or it will not be light. The flavouring of this cake may be varied by adding a few drops of essence of almonds, instead of the grated lemon-rind.

SPRATS

Sprats should be cooked very fresh. Their condition can be ascertained by their eyes, which should be bright. Wipe them dry; fasten them in rows

by a skewer run through the eyes, dredge with flour, and broil them on a gridiron over a nice clear fire. The gridiron should be rubbed with suet. Serve very hot, with cut lemons and brown bread and butter.

STEAK, STEWED

Remove the fat from 1 lb. of beef-steak and put it aside until wanted, divide the lean into 5 or 6 pieces. Cut 1 onion, 1 carrot, and $\frac{1}{2}$ a turnip into dice or julienne strips, and keep them in water until required. Heat 1 oz. of butter in a stewpan, fry the steak quickly until browned on both sides, remove it, put in the trimmings of the vegetables and 1 oz. of flour, fry brown, then add $\frac{3}{4}$ pint of stock or water, and stir until boiling. Replace the meat, season to taste, cover closely, and cook gently for about 2 hours. When done, have ready the dice or strips of vegetables boiled until tender in salted water, and the fat of the meat fried and nicely browned. Arrange the pieces of steak neatly on a hot dish, strain the sauce over, place the fat on the top, and garnish the base with groups of the prepared vegetables.

SUET CRUST

Free 6 oz. of suet from skin, shred it into fine flakes, but do not chop it. Add 12 oz. of flour to the suet, and mix both well together in a basin, then add $\frac{1}{2}$ teaspoonful of salt, 1 heaped teaspoonful of baking-powder, and as much cold water as is necessary to mix the whole into a fairly stiff paste. Knead lightly, then roll out, and use for any kind of pie or pudding intended to be eaten hot.

SUET PUDDING

Mix 12 oz. of flour, 6 oz. of finely-chopped suet, 1 teaspoonful of baking-powder, and $\frac{1}{2}$ teaspoonful of salt together, and add water gradually until a rather stiff paste is formed. Shape it into a roll, wrap it in a pudding-cloth, which must be previously scalded and well dredged with flour on the inner side, and secure the ends with string. Put it into boiling water, and cook for about 2 $\frac{1}{2}$ hours. Serve with jam, treacle, stewed fruit, or, if preferred, good gravy.

The preceding mixture may also be made into dumplings, which require boiling for two hours.

SWEETBREAD, FRIED

Blanch 1 calf's heart sweetbread by first soaking it in cold water, to free it from blood. Then put it into a stewpan, cover with cold water, and bring slowly to boil. After two or three minutes gently cooking, transfer to a basin of cold water and allow it to remain there until cold. Then put it into a stewpan with 1 pint of white stock or water (when water is used add a little onion, carrot and turnip), add seasoning, if necessary, and simmer gently for 40 minutes. Press between two plates until cold, then cut into slices, brush over with egg, coat with breadcrumbs, and fry in the butter in a sauté-pan, or in a deep pan of hot fat, until lightly browned. Drain well, and serve on a folded serviette or dish paper, garnished with fried parsley.

TAPIOCA OR SAGO PUDDING

Boil 1 pint of milk, sprinkle in 2 tablespoonfuls of tapioca or sago, stir until boiling, and simmer gently until it becomes clear, stirring occasionally. Add 1 tablespoonful of sugar (or to taste) and a good pinch of salt, and, when a little cool, 2 eggs (optional) beaten. Pour into a greased pie-dish, and bake in a slow oven for about $\frac{1}{2}$ an hour.

TART, OPEN, OF STRAWBERRY, OR OTHER PRESERVE

Butter a tart or sandwich tin of the usual shape, roll out some short crust paste or trimmings of puff paste to the thickness of $\frac{1}{2}$ of an inch, and line the pan with it, prick a few holes at the bottom with a fork, to prevent the paste rising and blistering, and bake the tart in a brisk oven from 10 to 15 minutes. Let the paste cool a little; then fill it with any kind of jam, place on it a few stars or leaves, which have been previously cut out of paste and baked, and the tart is ready for table. By making the tart in this manner, both the flavour and the colour of the jam are preserved, which would be

spoiled were it baked in the oven on the paste, and less jam is required.

TEA, TO MAKE

In order to make good tea it is necessary that the water should be quite boiling, but it must on no account be water that has boiled for some time or been previously boiled, cooled, and then re-boiled. It is a good plan to empty the kettle and refill it with fresh cold water, and make the tea the moment it reaches boiling point. Soft water makes the best tea, and boiling softens the water, but after it has boiled for some time it again becomes hard. When water is very hard, a tiny pinch of carbonate of soda may be put into the teapot with the tea, but it must be used very sparingly, otherwise it may impart a very unpleasant taste to the beverage. Tea is better made in an earthen than a metal pot. One good teaspoonful of tea will be found sufficient for two small cups, if made with boiling water and allowed to stand 3 or 4 minutes. The delicate flavour of the tea may be preserved, and injurious effects avoided, by pouring the tea, after it has stood 3 or 4 minutes, into a clean teapot which has been previously heated.

TOAD-IN-THE-HOLE

Mix 4 ozs. of flour, $\frac{1}{2}$ a pint of milk, 1 egg, and a little salt into a smooth batter, and beat well. Put into a Yorkshire pudding tin sufficient dripping to form a thin layer when melted, pour in about $\frac{1}{2}$ of the batter, and bake until set. Then add 1 lb. of beef-steak (cut up small), season it with salt and pepper, pour in the remainder of the batter, bake quickly until it has risen and set, and then more slowly until sufficiently cooked. Serve in squares arranged neatly overlapping each other on a hot dish.

TOFFEE

Put $\frac{1}{2}$ of a pint of water and 1 lb. of loaf sugar into a sugar-boiler or stewpan, stir occasionally until dissolved, bring to the boiling point, and add a pinch of cream of tartar or other flavouring. Boil to the "large crack" degree, which may be recognized by dipping the forefinger into cold water,

then into the sugar, and again quickly into the water. If the sugar breaks short and brittle, and does not stick to the teeth when bitten, it is boiled sufficiently. Then pour into an oiled tin, allow it to cool slightly, then mark off into diamonds or squares with a knife, and when cold divide into sections thus formed.

TOMATO SOUP

Slice 2 lbs. of tomatoes (either fresh or preserved), 1 onion, and 1 carrot; cut 2 ozs. of lean ham into small dice cubes. Melt 1 oz. of butter, add to it the ham, carrot, and onion, fry for 5 minutes, put in the tomatoes and a bouquet-garni (parsley, thyme, bay-leaf), and cook for 15 minutes longer. Pour in 1 quart of second stock or water, and cook gently until the vegetables are tender, then rub the ingredients through a wire sieve. Return the soup to the stew-pan, and when boiling sprinkle in the sago, and cook until it becomes transparent. Season to taste, add a good pinch of sugar, and serve. Croûtons, or small slices of fried or toasted bread, should be served separately. Ham may be omitted when stock is used.

TREACLE PUDDING

Mix 1 lb. of flour, 8 oz. of finely-chopped suet, 1 teaspoonful of baking-powder, and a good pinch of salt together, and form into a stiff paste with cold water. Divide it into two equal portions; with one line the basin, from the other portion cut off sufficient paste to form the lid, and roll the remainder out thinly. Put a layer of treacle in the basin, sprinkle liberally with bread-crumbs, and lightly with lemon-rind. From the rolled-out paste cut a round sufficiently large to rather more than cover the treacle, etc., in the basin, moisten the edges of it with water, and join them carefully to the paste lining the basin. Now add another layer of treacle, breadcrumbs, and lemon-rind, and cover with pastry as before. Repeat until the pudding basin is full, then cover with a greased paper, and steam for 2½ hours.

TRIBE AND ONIONS

Cut 2 lbs. of dressed tripe into 3-inch squares, put them into a stew-

pan, cover with cold water, bring to boiling point, and strain. Replace the tripe, add ½ a pint of milk, ½ a pint of water, and a teaspoonful of salt, boil up, put in 2 large thinly-sliced onions, and simmer for 3 hours. Twenty minutes before serving have a tablespoonful of flour mixed smoothly with a little milk, pour it into the stewpan, stir until boiling, and simmer for 15 minutes. Season to taste, and serve.

TURBOT, BOILED

Empty and wash the fish, trim the fins, but do not cut them off, as the gelatinous parts about them are esteemed a great delicacy. Make an incision down the middle of the back, to lessen the possibility of the skin on the white side cracking, and rub the white side of the fish with a cut lemon to increase its whiteness. Have ready the turbot-kettle, with as much hot water as will cover the fish, add salt to taste, put in the fish, bring gradually to near boiling point, then simmer very gently from 15 to 20 minutes. Garnish with lobster coral, parsley, and cut lemon, and serve with Hollandaise, anchovy, shrimp, or lobster sauce.

TURKEY, ROASTED

Prepare and truss the turkey. Fill the crop with 1 to 2 lbs. of sausage-meat, and put 1 to 1½ lbs. of veal forcemeat inside the body of the bird. Skewer 2 or 3 slices of bacon over the breast, baste well with hot fat, and roast in front of a clear fire or in a moderate oven from 1½ to 2½ hours, according to age and size of the bird. Baste frequently, and about 20 minutes before serving remove the bacon to allow the breast to brown. Remove the trussing strings, serve on a hot dish, and send gravy and bread sauce to table in sauceboats.

TURNIP-GREENS, BOILED

Wash the greens well in 2 or 3 waters, pick off all the decayed and dead leaves, tie them in small bunches, and put them into plenty of boiling water. To each ½ gallon of water allow 1 tablespoonful of salt. Keep them boiling quickly with the saucepan uncovered, and, when tender, pour them into a

colander; let them drain, arrange them in a vegetable-dish, remove the string that the greens were tied with, and serve.

TURNIPS, BOILED

Pare the turnips, and, should they be very large, divide them into quarters, but if they are small, let them be cooked whole. Put them into a saucepan of boiling water, salted in the proportion of 1 heaped tablespoonful of salt, to each $\frac{1}{2}$ gallon of water, and let them boil gently until tender. Try them with a fork, and, when done, take them up in a colander, let them thoroughly drain, and serve. Boiled turnips are usually sent to table with boiled mutton, but are infinitely nicer when mashed than served whole; unless nice and young, they are scarcely worth the trouble of dressing plainly as above.

VEGETABLE MARROWS

Peel the marrows, quarter them, and remove the seeds. Boil them in salt and water from 15 to 20 minutes, or until tender. Drain well, dish on toast, pour white sauce over, and serve.

VEGETABLE PIE

Stew 1 onion, 1 carrot, 1 stick of celery, a handful of green peas, $\frac{1}{2}$ oz. of sago or tapioca, 1 oz. of butter, pepper and salt, a teaspoonful of flour together in a very little water until they are three parts cooked. They should be cut into small pieces; then place them in a piedish, cover it with a crust like a meat pie, and bake it until the crust is done. The pie may be made of any vegetables that are in season. A few mushrooms or some mushroom powder are an improvement.

VEGETABLE SOUP

Prepare 2 carrots, 1 turnip, 1 onion, 1 leek, 2 strips of celery, 1 dessertspoonful of finely-chopped parsley, and cut them into strips about the size of a short and rather thick match. Melt 2 ozs. of butter in a stewpan, and fry the vegetables very slowly until the butter is absorbed; then add 1 pint of boiling water, $\frac{1}{2}$ of a pint of milk, salt, and pepper, and simmer gently until the vegetables are tender (5 to 10

minutes). Mix $1\frac{1}{2}$ ozs. of flour and $\frac{1}{2}$ pint of milk smoothly together, pour the mixture into the saucepan, stir and cook for a few minutes, then serve.

WELSH RAREBIT

Melt 1 oz. of butter in a stewpan, add $\frac{1}{2}$ lb. of Cheshire or Cheddar cheese cut into small pieces, stir until melted, then add 2 tablespoonfuls of either milk or ale gradually, mustard and season to taste. Have read some hot buttered toast, placed on a plate or dish, pour the cheese preparation on to it, and serve as hot as possible.

WHITE SAUCE FOR PUDDINGS

Blend 1 dessertspoonful of cornflour smoothly with a little cold milk, and put the remainder of $\frac{1}{2}$ of a pint into a saucepan. Add 2 or 3 strips of lemon-rind and a pinch of salt, simmer gently for 10 to 15 minutes, then strain over the blended cornflour, stirring meanwhile. Return to the saucepan, sweeten to taste, simmer gently for 5 minutes, and use as required. Any other flavouring may be substituted for the lemon-rind.

YORKSHIRE PUDDING

Put 4 heaped tablespoonfuls of flour and a good pinch of salt into a basin, make a well in the centre, break in 1 eggs, stir gradually, mixing in the flour from the sides, and add milk by degrees until a thick, smooth batter is formed. Now beat well for 10 minutes, then add the remainder of $\frac{1}{2}$ pint of milk, a little salt, cover, and let it stand for at least 1 hour. When ready to use, cover the bottom of a pudding tin with a thin layer of dripping taken from the meat tin, and while the tin and dripping are getting thoroughly hot in the oven, give the batter another good beating. Bake the pudding for 10 minutes in a hot oven to partially cook the bottom, or, if more convenient, place the hottest shelf from the oven on the meat stand, and at once put the pudding in front of the fire, and cook it until set and well browned. "Yorkshire" pudding is always cooked in front of the fire; when baked in the oven, the term "batter pudding" is applied to it by the people in the county whence it derives its name.

DANCING

ALL steps used in dancing, however complicated, are primarily founded upon the five movements by which man can most easily and naturally make progress over the ground: running, walking, jumping, hopping, and sliding.

In dancing proper these various movements are subject to certain artistic regulations which have been recognized in civilized countries from the remotest ages; but even apart from such regulations, the employment of natural movements alternately, or at recurring intervals in rhythmic measure, would still be dancing in a simple form.

It is held necessary, however, that even in ball-room dancing the feet should be turned outward, that the toes should point downward when the foot is raised, and that a general graceful style of execution should be adopted. When performed according to the rules, the walking step becomes a *pas marché*, the running step, or jump from one foot to the other, a *pas jeté*, the hopping step, a *pas sauté*, and the gliding step, a *pas glissé*. The French terms are adopted in technical works, because they are understood in all countries by those who make dancing a profession.

POSITIONS OF THE FEET

The proper way to acquire the Art of Dancing is to begin by learning to execute the various steps and movements that are common to all dances, in an easy and graceful manner, apart from their combinations. Thus the *jeté* or jump, the *glissade* or glide, the *coupé* or cut, etc., should be practised separately, and when these simple steps are thoroughly mastered, the acquirement of any ball-room dance becomes a comparatively easy matter. The pupil

will also do well to make himself acquainted with the rudimentary positions, which are to dancing precisely what the notes of the scale are to music. A person may dance after a fashion without knowing the positions, just as one may sing without knowing a note of music. Some people are naturally graceful, and dance almost spontaneously, while some have naturally a correct musical ear and good voice, but in both cases the qualities are improved by cultivation, and nothing approaching perfection can ever be obtained, either in dancing or music, without some theoretical knowledge.

There are five positions of the feet employed in the dancing of Society, as well as in theatrical dancing; but in the former it is not customary to turn the toes so much outward as in the latter. Still, a position in which the feet of the dancer are placed parallel, or in which there is the slightest inward inclination of the toes, is entirely destitute of gracefulness, and the pupil should at all times be particularly careful to turn his feet so that they form an angle one with the other not far removed from ninety degrees, which will be, of course, a right angle.

Supposing, then, that the feet are turned outward thus, the *First Position* will be that in which the heels are close together. In the *Second Position* one foot will be placed to the side of and a short distance away from the other. The *Third Position* will be that in which the heel of one foot is placed close against the hollow of the other foot. In the *Fourth Position* the feet are again separated, one being placed a short distance before the other, as in ordinary walking; and in the *Fifth Position* the feet are brought once more close

together, the heel of one being placed against the toes of the other.

If when one foot is placed in front of the other you are balancing your body on the leg that is in advance, the other foot is said to be in the fourth position behind, and it is the same with regard to the third and fifth positions when you have your balance sustained on the foremost foot.

In the open positions—i.e. the second and fourth—the feet are generally separated at a distance of about the length of one of your own feet. This is a good rule, because naturally a little girl would not separate her feet so widely as would a tall man, and, if any particular distance were specified, a position that would be comparatively close for one would appear quite a stretch for the other. In dancing with a partner the gentleman should accommodate his steps to those of the lady—that is, he must not separate his feet so widely as to cause her inconvenience. If either foot is extended in a position midway between the second and fourth, it is described as being in the *intermediate position*.

If the foot is raised and extended to the side, however high it may be from the floor, it is still said to be in the second position, or in the fourth position if it be raised and extended forward.

In crossed positions, or those in which the limbs of the dancer are passed one before the other, the toes of one foot should invariably point towards the toes of the other foot. These positions, however, are rarely employed.

SOME USEFUL HINTS

Assuming that you, are one of those who desire to dance properly, and are willing to submit to a few of the simple restrictions imposed by Art on our natural movements; even if you are not able to take lessons, you will certainly profit by paying strict attention to the following hints:

Be particularly careful when dancing to turn the knees outward. Our limbs are so formed that, although we may turn out our feet while keeping the knees bent forward, it is almost a physical impossibility to turn the knees outward without also turning out the toes

In the ordinary movements of everyday life, such as walking, running, etc., our limbs swing from the hip joints mostly in a forward and backward direction; but in dancing, side movements, in which the ball rotates in the socket, are extensively used. Although such movements are strictly accordant with the natural articulation of the limbs, they present some difficulty to beginners, and require practice, because they are movements to which we are unaccustomed.

Movements in which one limb is raised and extended in various directions, while the other supports the body, are technically called *battements*, and should be frequently practised. When these are made directly to the side, great care must be taken that the toes of the supporting foot do not turn inward as the opposite limb is raised. The best manner of practising is to grasp some firm object with one hand at a convenient height, and raise the opposite foot in the *second position*, being careful to keep the toes turned downwards. Do this several times, and as you lower the foot, bring it alternately to the *fifth position* before and behind the supporting limb.

Another good exercise for cultivating a pliant and free action of the joints is to place the heels together and bend the knees outward, rising and sinking, sometimes slowly and sometimes quickly, while keeping the upper part of the body erect. This should afterwards be practised in each of the closed positions, while counting evenly so that the flexions are of equal duration. The knees should always be lowered in a direct line with the toes.

In slow, progressive movements the body should generally be held erect, the chest expanded, and even thrown a little forward; but in rapid dancing it is proper and more graceful to curve the back slightly outward from the centre of rotation.

Always bend the knee before attempting to leap or hop, and see that on alighting you descend on your toes. This rule especially applies to such dances as the polka and schottische.

The correct position in which to hold your partner is as follows, supposing the dance to be a round one:—

The gentleman places his right hand against the waist of his partner, immediately above her skirt. His hand must only be bent sufficiently to follow the curve of her body, and his arm must on no account encircle her waist. The lady places her left hand lightly on or just beneath the gentleman's right shoulder, the position of her hand being regulated by their respective heights. She must not take her partner by the elbow, a position which is opposed to the principles of gracefulness and of good taste.

The fingers of the lady's hand which is placed just beneath her partner's shoulder should be curved inwards a little towards herself. The gentleman takes the lady's right hand in his left, which he holds palm upwards while she places hers therein palm downwards. Any extension of the arms, which ought to be kept gracefully rounded, is not only incorrect, but it indicates a vulgar style of dancing; besides, extension of the arms is frequently a cause of great annoyance and even danger to other dancers. The partners should generally have their right and left shoulders as nearly as possible removed at equal distances, and each should look over the right shoulder of the other.

The head should not be kept in a fixed position. It is well to turn it from time to time, since any rigidity of the muscles of the neck causes a dancer's movements to have a stiff and constrained appearance. Generally speaking, the only part of the body in which any degree of muscular tension needs to be employed is the supporting limb, all the other parts should be kept pliant.

Most of the exhaustion complained of by beginners and bad dancers, is produced by wholly unnecessary muscular contraction—mere waste of energy. In all good dancing very little exertion is needed, and in the waltz, where the action of the partners is reciprocal, many of the movements may be taken without the slightest effort, provided, of course, that the dance has been acquired on scientific principles.

Do not imagine that in round dances you are likely to be behind time with the music; nearly all beginners make

the mistake of being in too great a hurry.

Do not, in performing square dances, if you happen to lead, set the example of waltzing in the figures. However common this practice may have become, it is not correct, neither is it good style. It is proper to present both hands and walk quietly round when turning partners or corners in a quadrille. Any rapid turning or twisting with the arm to the waist should certainly be avoided.

The elbows of a dancer should, like his knees, be turned outward—that is, away from his body—and a graceful action of the wrist should be cultivated.

The fingers should be kept well grouped; nothing betrays the novice so much as spreading them apart.

BALL-ROOM MANNERS

On entering a private ball-room your first care should be to find and address yourself to the hostess, after which you may acknowledge any of your friends who happen to be present.

If you receive a programme of the dances, you will write thereon the names of the ladies whom you engage, and on their programmes you also write your name or initials.

In the "good old times" it was customary to request the "honour," or at least the "pleasure" of a lady's company in a dance; and that custom still prevails although the modified address "Will you favour me?" is most frequently used.

If you take part in a square dance, it is proper to pay almost exclusive attention to your own partner. It would not be kind or gentlemanlike to let it be evident by your manner that you would prefer to be dancing with some other lady.

When you have finished dancing, do not walk about the ball-room with your partner. Ask her if she will partake of refreshment, and if she says she will, you must lead her to the room provided, and see that she is comfortably seated, and get what she needs. But, whether you go to the refreshment room, walk in the corridor, or rest in the cool of the conservatory, the lady has a claim on your attention, and

must, on no account, be left until you have taken her back to her chaperon, or some other partner claims her.

It is not considered correct for a gentleman to ask a lady to be his partner unless he has been previously introduced; therefore, if you see any girl with whom you wish to dance and with whom you are unacquainted, the proper course is to go up to a steward, if at a public ball, or some member of the family at a private dance, and ask for an introduction.

A man who possesses the innate feelings of a gentleman, will not fail to lead out ladies who appear to be neglected by others—but he will not, of course, do this ostentatiously. Private preferences should not be made too evident in the ball-room.

If a girl is engaged when you ask her to dance, and she promises to be your partner for the next, or any of the following dances, do not fail to be in readiness to claim her when the time comes. Neglect to fulfil a ball-room engagement, if intentional, is an unpardonable breach of etiquette; but it is always well not to be too ready to take offence, because sometimes mistakes occur inadvertently.

If you are invited to a ball or party, do not forget to ask the daughters of your hostess to dance, and also the daughters of people at whose houses you have recently been entertained.

About half-way through the list of dances, there is usually an interval for supper. The gentleman escorts to the table the lady who was his partner for the last dance, the companion whom he took with him to the ball, or any unaccompanied lady who may happen to be present.

If you have occasion to leave a dance before the rest of the company retire, it is neither necessary nor correct to say "good-night" to your entertainers, unless, of course, you should chance to meet them on your way from the ball-room. The reason for this is that the departure of individual guests may be taken as a signal for breaking up.

THE LANCERS.

FIRST FIGURE.—The leading lady and opposite gentleman advance to the centre and retire one step with *balance*.

They advance one step with *balance* then join hands, turn once round, and retire to places (eight bars). The leading couple join hands and cross over to opposite place, the second, or *vis-à-vis* couple passing them on the outside; then the second couple in returning lead through the centre, while the first couple pass on the outside (eight bars). All set at corners and turn (eight bars). This is done four times, each lady commencing in turn.

SECOND FIGURE.—The leading couple advance and retire, advance again, and the lady remains in the centre while the gentleman retires (eight bars). Set and turn to places (eight bars). The side couples join the leading couples, forming two lines, each of four; all advance and retire together, then turn partners to places (eight bars). The other couples repeat this in turn.

THIRD FIGURE.—The four ladies advance to the centre and retire, then the gentlemen advance, and join hands to form a ring, the ladies placing their hands lightly on the gentlemen's wrists (eight bars). All move round to the left and break off on reaching places (eight bars). The four gentlemen advance to the centre, and, bowing to the ladies, give their left hands across to each other (eight bars). The gentlemen give their disengaged hands to their partners, or place them to the ladies' waists, and thus go round to places (eight bars). This figure is repeated.

FOURTH FIGURE (OLD STYLE).—The leading couples visit first the couple on their right, then the couple on their left (eight bars). All four *chasses croisez*, the first couples return to places (eight bars). Leading couples right and left (eight bars). The others repeat.

The more modern method of dancing the fourth figure is as follows:

FOURTH FIGURE (NEW STYLE).—The leading couples advance to visit first the couples on their right, then the couple on their left (eight bars). Give right hands across, and walk round with three steps and close the feet. Then give left hands across and walk round in the opposite direction (eight bars). Now, do not give both hands across

like a turnstile, which, although a common practice, is altogether inartistic, but join hands in a ring, move round, and then return to places (eight bars). This figure is repeated by the leading couples, who now visit first the left and then the right-hand couples. The whole figure is then repeated by the side couples.

FIFTH FIGURE. FINALE.—This figure begins immediately with the music, a preliminary chord only being played. Grand chain, giving right and left hands alternately, and pause on meeting your partner in the opposite place, then continue grand chain to places (sixteen bars). The leading couple promenade round inside the figure and finish in their own places, standing with their faces turned outward from the centre. The side couples fall in behind while the opposite couple remain in their place (eight bars). The partners cross each other, the gentlemen passing behind the ladies; they then *balance* forward and backward and recross to places (eight bars). Ladies lead off to the right, and gentlemen to the left; they meet at the bottom, and each gentleman leads his partner up again; they separate, retiring to opposite sides (eight bars). Fall back in two lines, ladies forming one and the gentlemen the other; advance in lines and retire; turn partners to places (eight bars). Grand chain. The other couples then do this in turn, and the grand chain is repeated to finish the figure.

Instead of advancing in lines, as above described, it is now customary in some circles for each couple in turn to raise and join hands—right and left should be given—to form a bower, beneath which the other couples pass till all reach their places, when they break off and resume the grand chain. This is not, of course, the best style of dancing the figure, but, unlike most modern innovations, there is little to be said against it on æsthetic grounds.

THE POLKA

The Polka is a dance in which there are four intervals to the musical bar, and four distinct movements of the feet to accompany them.

The first movement, say for the gentleman, is a rise on to the toes of the

right foot in bringing the left foot behind in the third position with the toe pointed downward and just removed from the floor. This is done quickly, immediately after the fourth beat, and for the movement count *and*. At the first beat of the next bar, which is generally marked by a strongly accented note, slide the left foot to the second position, and transfer the balance to the left leg, slightly bending the knee. For this count one. At the second beat bring the right foot down in the place occupied by the left foot, which is at the same instant raised ready for the next step. For this count two. For the third beat, which is always strongly accented in the music, jump lightly from the right foot on to the left, but do not spring high, and be careful that you come down on the toes only of the left foot, bending the knee. For this count three. Now pause at the fourth interval, and then rise on the toes of the left foot, bringing the right foot behind ready to recommence the movement in the opposite direction, counting *and* as before.

The lady's step is the exact counterpart of the above, she commencing with her right foot in making the slide, having previously risen on the toes of her left.

In dancing with a partner a half-circle is completed in each bar, the turning being performed chiefly on the sole of the balancing foot during the fourth interval.

THE SCHOTTISCHE

In the Schottische, as in the polka, there are four beats to the bar, and four separate movements of the feet; but the dance begins on the first beat instead of on the fourth, as is the case in the polka.

The step for the gentleman is as follows; but first we must mention that the dance is composed of two parts, the steps in the one part being taken in a line, while in the other part the movement is rotary. It takes four measures of the music to complete the figure of the dance. For the first part, commence by sliding the left foot to the second position, counting one, and balance the body on the left leg. Then bring the right foot up to, the

place of the left, at the same time raising the left to make way for it. For this count two. At the third beat spring lightly on to the left foot, bending the knee a little, and for the fourth count pause an instant and then hop lightly on the toe of the left foot, having the left foot raised in the third position behind.

This movement is now repeated in the opposite direction, thus : slide the right foot to the second position ; bring the left to the place of the right, which is simultaneously raised ; spring lightly on to the right with a flexion of the limb, and then hop softly thereon.

The second, or rotary part, is composed of four springing steps from one foot to the other, and four hops on the foot to which the balance has been changed. These steps and hops are taken alternately, thus : the gentleman springs from the right to the left foot, he then hops lightly on the left in turning half round. After this he springs from the left to the right foot, upon which he afterwards hops, turning again half round. This completes one bar. In the next bar he again springs from one foot to the other, and hops each time half round, after which he recommences the movement in a line, as previously explained.

The step for the lady is the same, only she commences with her right foot instead of the left.

THE BARN DANCE

The Barn Dance, or Military Schottische, by which name it is, perhaps, better known across the Atlantic, consists of a step that has been employed, it may be for ages, in the Highland reel, together with the round movement of the ordinary schottische.

The figure of the Barn Dance occupies four measures of common time music. In the first two bars the partners face the line of direction, either joining right and left hands, as in the old dances, or else the gentleman may keep his right hand to the lady's waist. In the second part, occupying the next two bars, the gentleman holds his partner as in the ordinary schottische, and executes precisely the same movements. The following are the steps

for the gentleman in the forward part of the dance :

One : Slide the left foot forward to the fourth position, and balance on the left leg. *Two* : Bring the right foot up to the place of the left, at the same time throwing the weight of the body on the right leg, and in doing so raise the left, with the toe pointed downward, a little in front. *Three* : Spring a little forward on to the left foot, raising the right behind, and bend the knee in preparation for the next movement. *Four* : Hop softly on the left foot, and at the same time extend the right leg with the toe pointed downward in front. The next four steps, which are the commencing steps for the lady, are as follows :

One : Slide the right foot forward to the fourth position, and balance thereon. *Two* : Bring the left foot up to the place of the right, throwing the balance on the left leg, and at the same time raise the right foot, pointed downward in front. *Three* : Spring a little forward on the right foot, raising the left behind, and bend the knee in preparation for the next movement. *Four* : Hop softly on the right foot, at the same time extending the left leg, with the toe pointed downward in front.

In the first bar, as the lady begins with her right foot and the gentleman with his left, the feet of the partners will be pointed towards each other at the fourth count, while in the next bar, as the gentleman begins with his right foot, and the lady with her left, they will be pointed in the direction away from one another at the last count.

The rotary movement, in which the gentleman takes his partner as for an ordinary round dance, is simply composed of alternate changes of balance in springing from one leg to the other, and hops, as in the schottische already described ; or if the dancers like, they may execute the waltz step to this part, making two complete turns, so as to finish facing the direction in which they are dancing ready to recommence the forward steps.

THE GALOP

This movement was at one time very popular, but, if a Galop tune be played

now, those who take part in it generally execute the step of the waltz, counting one and two, one and two, thus performing the three movements in two intervals. The real step of the Galop, however, is that technically termed a *chassé* or chasing step, in which one foot appears to be chasing the other as it moves over the floor. Suppose you begin with the left foot, that foot will remain in front so long as you continue the *chassé* forward. You bring the right foot up to the left, momentarily receiving the weight of the body, and immediately the left foot is again advanced, sustaining the balance as before. This movement may be continued *ad lib.* in a forward direction; but when you wish to turn you must execute the *chassé* sideways to the right and left alternately, turning half round each time.

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The company arrange themselves in two lines, the ladies on one side and the gentlemen on the other, each dancer being opposite his or her partner. The top of the line is that which is to the right of the ladies as they stand, and consequently to the left of the gentlemen. The dance proceeds as follows:

The lady who is at the top of her line and the gentleman who is at the bottom of his line advance and turn once round with right hands joined. The lady and gentleman who are their *vis-à-vis*, i.e., in this case their partners—do the same. The same lady and gentleman who commenced advance and turn once round with their left hands joined. Their partners repeat this. The first lady and end gentleman now turn with both hands joined. Their partners repeat this. The first lady and end gentleman turn back to back, and this also is repeated by their partners, after which they advance, bow, and retire.

Now the lady and gentleman who are at the top of each line lead round, the lady to her right and her partner to his left, followed by the rest of the dancers. When the leading couple reach the place where the end lady and gentleman stood; they join hands to form an arch, under which all the

couples pass to their respective places, the lady and her partner who were at the top remaining at the bottom of the lines. The figure is repeated until the dancers who were at the bottom of the lines in commencing have reached the top place.

Every one is acquainted with the old English tune that accompanies this dance. It is seldom performed now except at Christmas time.

THE WALTZ

The steps of the modern Waltz may be described as follows, say for the lady:

At the first count of the bar she begins by sliding her right foot forward to the fourth position, but does not transfer the balance to the right leg till the second interval. Then, just before the third beat, she slides her left foot lightly forward, in turning a little on her right leg, and at the third count she again slides the right foot a little forward, but turning it so much round that the heel is in the direction towards which she is dancing.

For the next bar, still turning her body, she slides her left foot round and backward, and transfers the balance to the left leg. She then, immediately before the third count of the bar—having dwelt upon this step—brings her right toe lightly to the heel of the left foot, and turns on the left sole without moving the right toe from its position on the floor. This action should change the relative position of the feet, so that the right foot, which was behind in commencing the turn, comes in front at the finish thereof, ready to recommence the forward movement first described.

The gentleman begins with his balance on the right leg. At the first count he slides the left foot round and backward, meanwhile pivoting on his right. He then transfers the balance of his body to his left leg, dwelling on this step, and just before the third count he brings his right toe lightly behind his left heel, and immediately turns on the sole of his left foot, without moving his right toe from its position on the floor. This action will change the relative position of his feet, the left, which was in front, being now behind, while the right is in front ready to be

slid forward in the next step. These three movements complete the first bar, during which, after the first slide, the balance should have been sustained entirely on the left leg.

For the next bar he continues as the lady commences—that is, he slides the right foot to the fourth position, and on finishing the step transfers his balance from the left to the right leg. He then, just before the third count, slides his left toe lightly in front in turning a little on the right leg, and at the third count he slides his right foot a very little forward, at the same time turning it round so much that the heel is towards the direction in which he is dancing.

Thus it will be seen that the first three steps for the gentleman are the same as the last three for the lady, and vice versa. By this arrangement, if the steps be taken as herein indicated, the feet of one partner will be continually playing in and out of and between those of the other, and the Waltz will have a pretty effect to onlookers, besides forming the most agreeable possible movement for the performers.

If the waltz step be taken forward in a line—beginning, say, with the right foot—after this has been slid forward the left toe is passed quickly and very lightly beyond it, and then the right is brought to the third position behind the left, sustaining the balance of the body so that the left limb is free and ready to be advanced. The left foot is now slid forward to the fourth position, the right toe passed lightly beyond it, and the left foot brought up to the third rearward position, sustaining the balance of the body, so that the right is forward and ready to be again advanced.

In taking the steps backward, the

left foot, say, is slid to the fourth position behind, the right toe is passed lightly behind the left a little distance beyond it, and then the left is closed to the third position in front of the right, sustaining the balance of the body, so that the right foot is free and ready to be slid backward in commencing the next bar.

While turning the ordinary way a man employs the flexors of his right arm in order to draw his partner round him, but in reversing he should employ the extensors, in order that he may impel her in the opposite direction. It is by this change of muscular action that the lady is made aware of her partner's intention to reverse.

It is most essential that the male pupil should learn the correct action of his arm and shoulders, since it is obviously with these that he directs the movements of his partner; indeed, success in waltzing, whether the dancer be male or female, depends quite as much upon harmonious action of the upper part of the body as upon the movements of the feet. There are girls who appear to dance as if they were altogether invertebrate, who offer no resistance whatever; and there are others who keep the body quite rigid, and move as if the vertebral column were composed of a single bone. As a matter of fact, there should be a natural undulating spinal movement, the back being generally curved outward from the centre of rotation. The partners should reciprocally and by turns draw slightly away from each other, thus causing the revolutions to become eccentric (in a dynamical sense), and it will be found that this increasing and decreasing intensity of motion forms one of the most agreeable features of the Waltz.

THE DOCTOR AT HOME

The doses of medicine prescribed are those intended for adults, unless otherwise stated

In this chapter the reader is presented with clear and accurate information regarding the principal diseases to which the human frame is liable. A detailed description is given of the symptoms by which each disease may be recognized, followed by an account of the appropriate treatment.

The work has been most carefully compiled and the instructions as to treatment are those that are most modern and have proved most successful in the great majority of cases. They may be relied upon as having been either verified by personal experience or sanctioned by the authority of distinguished professional men.

It must be clearly understood, however, that by treating medical subjects in a popular way we have no intention of superseding the physician by making every man believe that he can be his own doctor. Far from that, we must impress upon the suffering that the services of a medical man are indispensable in all cases of serious illness.

Nevertheless, the reader who has mastered the directions that are given may render himself of great use in cases where immediate help makes all the difference between life and death, but where no skilled medical aid is at hand. Such a consideration should make every intelligent man and woman desire to have some knowledge of the healing art. There are times, for example, when a knowledge of the signs of incipient disease may warn an anxious parent in time to save the life of a beloved child, whereas, did no such knowledge exist, the malady might be allowed to drift past all remedy.

But apart from cases of real illness, there are numbers of lesser ailments, simply and easily removable by means which all may employ, about which it is important that every one should know something. To all these particular attention has been given. Indeed, in regard to these simple ailments, such as colds, cuts, bruises, etc., etc., where the services of a doctor are not absolutely necessary this chapter should prove invaluable.

The health and management of children have also been dealt with as fully as space would permit.

Information has been added on every other topic which one would expect to find treated in a chapter of this nature.

PULSE.

The following is the table drawn up by M. Quetelet:—

Age.	Average of pulsations per minute.			
Birth	136
5 years	88
10 to 15	78
15 to 20	69
20 to 25	69
25 to 30	71
30 to 50	70

be felt, this is because the elastic artery dilates with each beat of the heart at regular intervals. The pulse does not quite correspond to the beat of the heart in time, but occurs just after it and, the farther the artery from the heart, the longer the interval. It follows that the pulse will be quick or slow, regular or irregular, according to the action of the heart at the time, and therefore it is useful as a guide in many diseases. Dr. Spenser Thomson has said that the average pulse of a healthy man in the prime of life may be taken as beating 72 times in the minute; but from this average

If the finger be placed upon an artery, what is known as the pulse may

there is every possible variation and, even in the same person, the pulse varies greatly, according to the period of the twenty-four hours, the time of meals, the posture and even physical exercise, mental emotion and external

temperature. In some persons the pulse is always quick, ranging at 90, or even more, in others it is slow, perhaps not exceeding 40 beats in the minute. Age influences greatly the frequency of the pulse.

INFECTIOUS AND CONTAGIOUS DISEASES

Consumption.—This disease is called technically phthisis, a Greek word, meaning a wasting away, wasting being a common symptom in the latter stages of the disease.

CAUSE.—Consumption is a form of lung disease which is characterized by destruction and ulceration of the lung itself; it is caused by the growth and multiplication in the lung substance of the tubercle bacillus, discovered by Professor Koch. These bacilli produce inflammatory changes in the lung; tissue of an inferior kind is then deposited round the bacilli, and gradually invades the lung tissue proper. At a later stage ulceration and degeneration take place in this tissue, and in the inflamed lung adjacent, resulting in the destruction of the lung by the formation of cavities in its substance. The blood that is often coughed up is a sign *that destruction of the lung is present*.

SYMPTOMS.—The earliest symptoms of consumption are probably connected with digestion. The appetite becomes capricious, there are pains in the chest, some cough, often dry and hacking, with a small quantity of frothy expectoration. There is debility, flushing of the face and shortness of breath on slight exertion; at other times the countenance is pale, except for a hectic patch of red in the middle of the cheek. There is some fever at night, and a tendency to night-sweats. Very likely there is some spitting of blood. As the disease advances emaciation becomes more marked, and the fingers become clubbed at their ends. The night-sweats, diarrhoea and expectoration reduce the bodily strength and substance; at the same time the capricious appetite and the imperfect digestion leave the bodily supply very deficient. Usually, if the disease be not arrested, the patient dies of exhaustion.

TREATMENT.—The selection of the

conditions under which the consumptive is to live is the first and most important item of the treatment. At different health resorts in Europe there are to be found people who have suffered all their lives from bad chests, but who, by moving from one resort to another, according to the season of the year, are able to live with little pain or discomfort. In selecting a house for a consumptive, the first great thing is to avoid a damp building, and to choose a dry and porous soil. Consumptives should live plainly, but their food should be nourishing; they must avoid excitement, but cheerful society is of the greatest value; they must not fatigue themselves, but daily exercise is essential. They must not be exposed to too great heat or cold, but open air is essential. They should always wear flannel, and the clothing must at all times be warm. There are a great many health resorts that might be mentioned, but only a few are given here. On the south coast of England, Bournemouth, Torquay, and South Devon, Hastings, Ventnor and Penzance are all frequented by consumptives. Abroad, the chief places recommended are the Engadine, St. Moritz, Davos Platz, etc., all Alpine climates, situated 4,500 to 6,000 feet above sea level; and the south coast of France. Latterly much attention has been paid to the open-air treatment of consumption, and several sanatoria have been opened for the purpose throughout the United Kingdom and abroad. This treatment has proved very successful, especially in the earlier stages of the disease—the progress of the disease being arrested, and the patient cured.

A sea voyage to South Africa, Australia or New Zealand is also useful in the early stages of the disease. No better climates can be found for the complete cure of the disease than those of the South African veldt, or the

interior of Australia. The coast towns should be avoided, as the conditions there are not much better than those obtaining in English cities. When well advanced, it is unwise to send patients from home. Fat is one of the articles of food to which consumptive patients have a great aversion, and it is to be regretted, for it is to them the most necessary. If they cannot be got to take fat in the ordinary way as food, they should take cod-liver oil, which, indeed, is rather food than medicine. It must be given cautiously and after a meal. When oil cannot be taken by the mouth it may be rubbed into the skin. Hypophosphites have proved useful in this disease. Fellows' syrup is an excellent preparation, and may be given to an adult in doses of a teaspoonful three times a day. Oil of eucalyptus is useful; it may be dropped on the sponge of respirators and inhaled; 3 to 5 drops may be used at a time. Should bleeding come on, the patient should be kept at rest, and the liquid extract of ergot given in 15 drop doses in water every 2, 3, or 4 hours, according to severity. Ice, if it can be had, should be taken internally. 10 grains of gallic acid with 15 drops of aromatic sulphuric acid may be given every 3 hours instead of the ergot if more convenient. An ice bag may be applied to the side from which the blood is supposed to come, the night-sweats may be relieved by the administration of dilute sulphuric acid in 15 drop doses in water at bedtime, or by 10 drops of tincture of belladonna in water. If diarrhoea is troublesome, 10 to 15 drops of laudanum may be given with 15 drops of dilute sulphuric acid every 4 hours, in water. Patients afflicted with the disease should avoid indiscriminate expectoration, since the sputum contains millions of bacilli, and when the sputum is dry these may be carried about in the air, and become a source of infection to healthy individuals. Little flasks are now sold in which patients can expectorate when travelling. At home a spittoon, containing a 1 in 20 solution of carbolic, should be used.

Influenza.—Influenza is a specific and epidemic fever which chiefly

attacks the lining membrane of the nose, larynx and bronchial tubes, lasting from four to eight days, and not preserving the individual from a future attack. In fact, one of the most remarkable features of the disease is that, so far from an attack conferring immunity for the future, the more one has of it the more one is likely to have.

The area attacked by this disease is much varied in extent, sometimes only a part of a country has been affected, at other times it has spread over a great part of the civilized world.

A disease is said to be "endemic" when it is confined to a small area, as a village or town; "epidemic" when it spreads over a country; "pandemic" when it invades a large portion of the earth's surface. Influenza occurs in both an epidemic and pandemic form. The poison seems to be conveyed by the air, and persons at a distance from land may become attacked. Attacking a community, the disorder generally remains for several months, but occasionally it has remained longer; the epidemic will completely disappear then for a time; nor is it usual to find an occasional case breaking out in the interval of epidemics. It is common to hear people complain in the winter of having an influenza cold, but this is a misapplication of the word. The onset of the disease is generally very rapid, while the decline is more gradual and may last several weeks. Various physical conditions have been supposed to influence the outbreak of this disease. The time of the year does not seem to have any effect, since it has been prevalent at all seasons. There is, also, no connexion between temperature and influenza; it occurs in high as in low temperatures, nor does any sudden variation of cold or heat seem to produce any effect. Moisture also has no apparent influence, nor is there evidence at present that any atmospheric condition has effect on this disorder. The intercourse of human beings does appear to have an influence on the disorder; thus, an affected person coming into a village seems to be a centre from which the disease spreads; nevertheless it is very remarkable that thousands may be attacked in the same

town in the course of a few hours, while in other contagious disorders the progress is much slower. In this disease, as in other contagious diseases, there is a period of incubation, when the poison seems, for a time, to be latent in the system before any of the marked symptoms declare themselves, and although, in most cases, persons seem to be suddenly struck with influenza, yet there is a period of incubation, which may be very short or may last for some days. In influenza, as we have said, one attack gives no immunity from another, and there are instances in which the same person has suffered more than once during the same epidemic. Various speculations have been made as to the nature of the exciting causes of this disorder. It cannot arise from contamination of water, as it would then be confined to a particular locality, nor to any kind of food. The rapid way in which it spreads shows that the poison must exist in and be conveyed from place to place by the air, for in this way alone can we account for the rapid transmission of the disorder. Dr. Burney Yeo holds that it is probably a bacillary disease, that is to say, propagated and diffused by a micro-organism, and there can be little doubt but that is the true causation of influenza. Both sexes seem to be equally attacked, but the young are said to be less liable to it than old people. Over-crowded habitations have increased the mortality in some epidemics, while places which are low, damp and badly ventilated appear to predispose to it.

SYMPTOMS.—The symptoms vary in severity in different epidemics and in different cases. The onset is sudden, announced in severe cases by marked rigor, more often by chill and shivering, alternating with flashes of heat. Then follow general lassitude, debility, nervous prostration, soreness and stiffness of the limbs, pains in the neck, back and loins, headache, frontal oppression, pain in the cheekbones and root of the nose, injection and sensitiveness of the eyes, with copious flow of tears, sneezing and tingling, followed by watery and often acrid discharge from the nose, soreness of

the tonsils, Eustachian tube and ears (experienced in swallowing), hoarseness, a short, frequent, harassing cough with slight expectoration, and a slight fever of the remittent kind, having its evacuation towards evening. The fever is seldom pronounced, but the restiveness, irritability, exhaustion and mental depression are marked and usually disproportionate to the bronchial complication. In other cases there are soreness, tightness and pain beneath the breast-bone, a sense of suffocation and danger of capillary bronchitis or pneumonia. These unfortunate complications are the chief causes of death from influenza and occur mainly in the aged, in invalids and in delicate children. The usual duration of mild cases is from three to five days, of grave cases from seven to ten days. The termination of the disease is often as sudden as its onset, and frequently occurs with a critical and profuse perspiration or diarrhœa. In healthy persons the portafity from uncomplicated influenza is very slight.

TREATMENT.—The majority of cases are mild and require no treatment. A purge at the outset may shorten the attack. More marked cases require a preliminary purgative, a low diet, the avoidance of exposure to cold, resort to hot draughts, as of lemonade or elderbloom tea, to stimulating foot-baths, to the use of Dover's powder, sweet spirits of nitre or other remedies to secure free perspiration, and the relief of bronchial congestion by the inhalation of steam, by ammonia, or by stimulating expectorant. Quinine is a drug of the utmost value, and is so efficacious in the generality of cases as to be almost an antitoxin. It is essential to adopt every precaution against complications and after effects, many of which are far graver than the influenza itself. Pneumonia or pleurisy following influenza is a condition that calls for the most unremitting attention. It is owing to the gravity of possible complications that all serious cases should be in the hands of the family doctor. Mild cases can readily be dealt with, subject to ordinary care and precaution, but if complications threaten the doctor should be summoned forthwith. During

epidemics the aged and feeble should keep within doors in well-warmed rooms, and partake of quinine, ammonia, and a guarded but nourishing diet, as measures of prevention.

Scarlet Fever, or Scarlatina.

SYMPTOMS.—1. *Mild Scarlet Fever.*—The onset is sudden; there is sore throat with tenderness at the angles of the lower jaw, and stiffness at the back of the neck; vomiting is very common, and chiefly so in children; shivering and rigors come on, and occasionally convulsions in young children. The temperature rapidly rises and will go up to 104° or 105° ; the pulse is very quick, the tongue is covered with a thin white fur; there is thirst and loss of appetite. This stage lasts from 12 to 30 hours, and then a rash comes out. Sometimes the earlier symptoms are so slight that the rash is the first thing noticed. This consists of small scarlet dots on a background of lighter red and almost running together so as to give a flush all over the skin; the colour disappears on pressure, but rapidly reappears when the pressure is removed. It generally appears at first on the sides of the neck and upper part of the chest and in the bends of the joints; it then spreads downwards, and is found to come out last on the legs; it begins to fade on the fourth or fifth day, and is generally quite gone within a week. The sore throat is always present in some degree; there is redness and swelling of the tonsils and soft palate, so that it is often very painful to swallow, while the glands beneath the jaw also swell and are painful. The temperature is generally higher than in measles, and much higher than in diphtheria, but it rarely exceeds 105° F.; the temperature falls to normal during the second week of the illness, or seventh to tenth day of disease. In no fever is the pulse quicker than in this disorder, and it may be 140 or 160 in a minute. Moderate delirium and headache are often present in these cases. After the rash has gone the epidermis is dry and harsh, and about the ninth or tenth day it begins to peel, and is sometimes cast off in large flakes, and this desquamation or peeling may

last a few days or occupy several weeks.

2. *Malignant Scarlet Fever* is characterized by an increased severity of the above symptoms; there are great prostration, delirium and sleeplessness; the rash does not always come out well; the face may be livid, and stupor and coma come on and end in death; the throat is ulcerated, and there is much difficulty in swallowing.

3. *Latent Scarlet Fever* is when the disease is so mild that until the sequelae appear one is not aware of having had scarlet fever. Sore throat may be the only symptom. There is no relation between the abundance of the rash and the danger to the patient. However mild the disease may be, the sequelae may come on with great severity; and the fever is just as likely to spread from a mild case as from a severe one.

4. *Sequelae.*—After the fever has passed, a train of symptoms may follow, which are very inconstant in their character and of much danger to the patient. The throat may continue to be affected, and the glands outside may be inflamed and swell, so that the patient's head seems encased in a collar; often these glands suppurate, and a large ulcerated surface is then seen. Deafness may supervene, and a discharge from the ear. Bronchitis and pneumonia are not so common as in measles. Sometimes convalescence is retarded by abscesses forming in various parts of the body; at other times there is a painful affection of the joints which much resembles rheumatic fever. Renal dropsy is also one of the most usual sequelae, but it frequently varies in different epidemics. Its onset is associated with a rise of temperature, headache, and often sickness and vomiting; the face and loose parts of the skin are very pale and puffy, which is best seen under the eyes and on the insteps; the urine is scanty, and dark from containing blood; loss of appetite is common, and convulsions sometimes occur. Renal dropsy often comes on 2 or 3 weeks after the first appearance of the rash.

TREATMENT.—Most cases recover in a fortnight, except the malignant ones, or where the sufferer is at the same time

pregnant (this condition much increases the danger, and hence women should then be extremely careful not to go near a case of scarlet fever). Even the mild cases must be nursed, for there is no remedy which will cut short an attack. The patient must be put to bed and administered a milk diet. Hot flannels or cotton wool, or spongio-piline, should be wrapped round the throat, and steam may be inhaled by the mouth when the throat is sore. If dropsy supervenes it is a symptom that the kidneys are affected, and the patient must be put to bed again if he has been up previously, and the diet still consist chiefly of milk. A hot bath and purgatives must be given to remedy the kidney affection, which is a serious development.

Exposure to cold too soon after an attack of scarlet fever often causes dropsy, so that great care should be taken to keep the patient in the house for at least three weeks after the rash and until the peeling has quite finished. During the stage of peeling, baths containing an antiseptic, such as Sanitas, should be occasionally given, care being taken to see that the water is as warm as the patient can comfortably bear it, and that a warm bottle is placed in the bed, or other precaution used, to ensure freedom from chill. When there is great prostration ammonia may require to be given. The throat may be thoroughly syringed with chlorine water by means of a 4 oz. ball syringe. During convalescence tonics should be administered for which purpose quinine and iron are probably the best. For the disinfecting measures to be used, the reader is referred to the remarks under the heading of Disinfectants, page 179.

Small-pox, or Variola.

SYMPTOMS.—The disease begins with shivering or rigors, pain in the back, vomiting, thirst, headache, and a general feeling of indisposition; in children, convulsions may come on. In many cases the rash of small-pox in vaccinated cases is preceded by a more or less scarlet or roseolous rash, which is mottled over the body. If the finger be pressed on the forehead, a sensation is experienced

as if pressing small shots, for the rash of small-pox generally commences there; at first a pimple forms, but afterwards a pustule, and then dries or scabs over, and leaves a pit or depression behind. When the rash comes out the temperature falls, but rises again about the eighth or ninth day; in mild cases, however, the secondary fever is hardly perceptible. The eruption usually appears first on the forehead, face and wrists, then on the rest of the body, coming out on the legs and feet 2 days later. The eruption takes about 8 days to arrive at its full development; during this time there is much swelling of the face and eyelids, so that the patient cannot see for a few days; in bad confluent cases the face seems covered with a mask, and a disagreeable odour proceeds from the body. Boils are apt to form in cases of confluent small-pox; the victims are also very subject to pleurisy, pneumonia and bronchitis; sometimes the tongue is much swollen and dry, and the patient may be unable to close the mouth or to speak; this is a very bad symptom. Inflammation of the ear, followed by an abscess, is not uncommon in this disorder. Erysipelas, gangrene, and pyæmia are occasionally met with. Inflammation of the eye and ulceration of the cornea may add to the general mischief. A medical man should always be called in when small-pox appears.

TREATMENT.—In the early stage, poultices and hot bottles will relieve the pain in the back and the chilly feeling. If the fever is high and delirium is present, sponging the body with tepid water is beneficial. When the eruption appears, warm baths are to be given night and morning. The pocks should be treated with some antiseptic application, such as carbolized oil or zinc ointment, or dusted with finely powdered boracic acid, as soon as the scabs come away. Painting with flexible collodion will both allay the irritation and in many cases prevent pitting. Dilute acetic acid, 1 part to 4 of water, often relieves the intense itching. Pitting is generally worse when the scabs are scratched away; children should therefore wear gloves undivided into fingers.

NON-INFECTIOUS DISEASES

Adenoids.—At the back of the nose and above the uvula the tissue of the roof of the throat is often, especially among children, overgrown and thickened so that little warty masses hang down, almost blocking up the back of the nostrils. As a consequence there is almost always nasal catarrh, snoring during sleep, and loud breathing at all times, a nasal voice more or less, and usually an increasing denseness of intellect. The affection is an extremely common one, especially among children who are placed among unhealthy conditions, though it is by no means confined to such. A child so affected does not get on either physically or mentally, and his face acquires an increasing look of stupidity, partly owing to mental change. If the case is neglected the mental dullness becomes permanent, and incurable ear diseases and deafness may also result. Seeing that adenoids are easily cured by a simple operation, no delay should be made in taking the child to a surgeon. After the adenoids have been removed it is of great importance to correct the bad habit of mouth breathing which has been acquired, and to develop proper nose breathing in its place. The principal points have been summarized as follows:—

1. Teach the child to clear the nose by blowing freely and frequently, and discourage sniffing and snuffing. To excite interest select a "picture" handkerchief for young children.

2. Direct the child to breathe in and out through the nose while the mouth is tightly closed. This might be adopted as a regular exercise for a minute or two, twice or thrice a day.

3. Where convenient adopt drilling and gymnastics, calculated to develop chest expansion. Insist on all these exercises being performed with closed lips.

4. Encourage running, jumping, skipping, and all exercises which expand the chest, always with closed lips.

5. Be sure that the nose is "quite clear" at all times, especially at bed time; use the "nose wash" if any discharge, and consult the doctor.

6. Encourage singing and reading aloud.

Anaemia.—**SYMPTOMS.**—A pale appearance of the skin and mucous membranes; the lips and gums lose the rosy look of health, and become of a delicate pink colour; exertion is difficult, and going upstairs or climbing a height out of doors give rise to breathlessness. Palpitation of the heart, headache, pain in the back, and in the left side, are frequently complained of; failure of physical and mental energy. Obstinate constipation is nearly always a prominent symptom.

TREATMENT.—Remove the patient, if possible, from all influences that tend to injure the health. Have the teeth attended to, and, if necessary, artificial teeth supplied. Well-ventilated rooms and workshops with plenty of light are desirable. A moderate amount of exercise in the open air is helpful in giving tone to the system. Change of air from the town to the country, or more particularly, to the sea-side, is often beneficial, and cold sponging, especially with salt water, is also helpful. The diet should be plain and nourishing, and a moderate amount of animal food should be taken. Under ordinary circumstances there is no necessity for stimulants. In regard to medicines, the one thing needful is iron. This may be given in the form of steel drops or Bland's pills; 10 to 20 drops of the former, and 1 or 2 of the latter 3 times a day. Aloes may be given with iron in the form of a pill; or as a mixture for the constipation, salines or a dose of cascara daily may be substituted.

Appendicitis.—**CAUSES.**—Since the lumen of the appendix is small it may readily become blocked by a faecal concretion or by a foreign body, cherry stone, etc. These, by pressure on the walls of the appendix, and by stopping the exit of the mucus secreted in its interior, set up inflammation. Over-eating, constipation and indigestion and a sudden chill, are common factors in its causation.

SYMPTOMS.—Pain in the abdomen, more especially in the lower part on the right side. This pain is often

accompanied by nausea and sickness. The tongue is furred, the temperature is often raised, and there is also constipation.

TREATMENT.—The patient should be put to bed and hot flannels applied to the painful side. The diet should be entirely fluid. Medical assistance must be obtained at once, since some cases, happily the minority, progress very rapidly, and early surgical treatment is essential for the safety of the patient.

Asthma.—Asthma—from a word signifying “to gasp for breath”—is a nervous disease, depending upon contraction of the circular muscular fibres surrounding the bronchial tubes. Occasionally it is connected with, and dependent upon, original malformation of the heart, or an unnatural conformation of the chest, in which case it usually makes its first appearance in childhood; otherwise it is most frequently met with about the middle period of life.

SYMPTOMS.—Asthma, whether connected with malformation or not, is a hurried, oppressed and noisy state of the breathing, coming on in paroxysms, and leaving the patient comparatively well in the intervals; although in some cases there may be observed wheezing and a more confined dilation of the chest than is natural in inspiration. In a typical asthmatic attack, the patient wakes up in the small hours of the morning with a sensation of suffocation; the difficulty of breathing continues, and a terrible struggle begins. He sits up in bed, or gets up and goes to the window, where he stands struggling for breath. The wheezing is attended with successional coughing, and at length the expectoration of some viscid phlegm gives him great relief; he breathes tolerably easily for a while, and after a little more coughing and expectoration the paroxysm ends. A peculiar state of the atmosphere is an exciting cause; damp, foggy weather will induce it in some, a north-east wind in others; some asthmatics are liable to attacks while spending a single night in a large town; others enjoy freedom from attacks while similarly circumstanced. A single indigestible meal, particularly

a hearty supper, is another exciting cause.

TREATMENT.—Avoid everything likely to set up an attack, particularly indigestible articles of diet. During the attack, if there is reason to believe that the stomach is at fault, an emetic of 20 grains of powdered ipecacuanha, or the same of sulphate of zinc, may be given to an adult. Temporary relief may be obtained by the patient taking a few whiffs from a pipe of tobacco or stramonium. Ozone papers are useful, as are also *Cigares "Anti-asthmiques"*. Inhaling the fumes from smouldering Himrod's powder gives relief. The general health of the patient should be carefully attended to. Change of air is often beneficial, and so are such tonics as cold sponging and the showerbath, when there is no other reason to prevent their employment.

Bright's Disease.—This is a name applied to several inflammatory affections of the kidneys, generally associated with albumen in the urine and often with dropsy. It may be either acute or chronic.

CAUSES.—Acute Bright's disease may occur from cold, from a blow, from taking substances such as turpentine or cantharides, which irritate the kidneys, but more usually it follows some acute febrile disturbance, and more especially scarlet fever.

SYMPTOMS.—Cold shivers, headache, pain in the back, often sickness. The temperature is raised, and the amount of urine excreted is diminished or almost suppressed, is occasionally bloody, and coagulable. Dropsy is often a secondary disorder.

TREATMENT.—Hot baths do good by causing sweating and giving free action to the excretory power of the skin. They may be taken at bedtime and repeated every night; the water should be about 95° to 98° Fahr., and the patient may remain in it for from 5 to 10 minutes, then be quickly dried and put to bed. Purgatives should be taken such as compound jalap powder, 20 to 30 grains of which may be taken by an adult. Rest in bed in a warm room is most important, nor ought the patient to think of leaving his room until all the dropsy and acute symptoms have subsided. Light nourishing

food may be given, such as bread and milk, veal tea, broth, rice pudding, arrowroot, and gruel. During convalescence great care must be taken to avoid cold, and flannel should be worn. Tonics containing iron and quinine are useful.

In *Chronic Bright's Disease*, even if an unskilled person were able to detect it, little if anything of practical use can be done except under medical direction.

Bronchitis.—This is an inflammatory disease of the lining membrane of the bronchial tubes. It may be acute or chronic.

SYMPTOMS.—Acute bronchitis is very liable to attack persons in the winter, and during the prevalence of east or north-east winds. It begins like an ordinary cold, succeeded by a feeling of chilliness, and aching pains in the limbs. The patient is thirsty and feverish, with languor and headache, loss of appetite and restlessness; there is an uneasy feeling of soreness behind the breast bone. At first there is a dry, hacking cough, and very little phlegm is brought up; in two or three days the cough becomes looser, and the expectoration is more abundant. Wheezing sounds are heard in the air passages.

TREATMENT.—When the chilly feeling is experienced, the patient should go to bed and keep there till he is warm again; in this way an attack may be checked in a short time. The air should be warm, and for this purpose a fire should be lighted and the temperature kept at about 60° F. A *bronchitis kettle* of boiling water placed on the fire, and the steam allowed to pass into the room, will help to keep the air moist. Inhalations of steam are very soothing, and may be obtained through an inhaler, or by holding the face over a jug of boiling water and wrapping a towel round the head and jug so as to prevent the escape of the steam. The inhalations may be medicated by the addition of a few drops of Eucalyptus oil, Terebene, or compound Tincture of Benzoin, to the boiling water. A warm bath before going to bed is also useful, as it encourages free perspiration. A hot linseed-meal poultice may be placed on the chest, and renewed every few hours if necessary.

A piece of gutta-percha tissue may be placed over the poultice to prevent the moisture from wetting the clothes. Rubbing the front of the chest with turpentine liniment often gives great relief. Turpentine stupes (cloths steeped in hot water, wrung nearly dry, and made irritant by moistening with a few drops of some volatile liquid) and sinapisms (mustard plasters), may be useful, should milder measures fail to give relief. A mixture such as the following may be given: ipecacuanha wine, 2 drachms; concentrated infusion of senega, 1 oz.; water to make 8 ozs.; a tablespoonful to be taken every 3 or 4 hours. Should the case be one in which stimulation seems necessary, as in old or debilitated subjects, carbonate of ammonia may be given with advantage in doses of 3 to 5 grains. A drachm to a drachm and a half added to the above mixture would answer very well. Five to ten drops of ipecacuanha wine mixed with thirty drops of syrup of squills and a teaspoonful of glycerine every four hours, is also useful. In children, this disease is at all times to be regarded gravely. The above treatment should be adopted with the modifications necessary to the child's age, and the avoidance of turpentine stupes and sinapisms unless ordered by a medical practitioner. The diet should consist of milk, beef-tea, veal-broth, milk arrowroot or cornflour.

Chronic Bronchitis.—This is a very common disease, and is very prevalent during winter, causing considerable mortality. It is most usually met with in middle-aged or old people. Cough, shortness of breath and expectoration are the three most constant symptoms of chronic bronchitis.

TREATMENT.—Removal of the sufferer to a warmer climate for the winter and spring, if possible. If this is out of the question, the treatment must be directed to avoiding, as much as possible, any exposure to cold, or any of the exciting causes of the disease. For those who are engaged in outdoor occupations, and exposed to all the inclemency of the weather, but little can be done to alleviate any distressing symptoms that may arise. Thick boots should be worn, clothes changed

when wet, and the patient be told to breathe through the nose, to be out as seldom as possible at night, and use a respirator.

Cancer.—The very name of this disease is fraught with so much significance, and the diagnosis is a matter of so much doubt to the lay mind, that the subject becomes out of the scope of this work. In the case of any tumour being discovered, medical advice should be taken at once, as if it should be of a malignant type early treatment may effect a permanent cure.

Catarrh.—Catarrh is a term applied to any slight inflammation of a lining membrane leading to increase of secretion. It is generally taken, however, to refer to those inflammatory conditions commonly known as a simple cold. In what is known as a common cold there is catarrh of the nose, throat and larger bronchial tubes; there are also constitutional symptoms associated with the catarrh. It is very doubtful if, in the majority of cases, a common cold is due to exposure to cold at all; the feeling of chilliness with which a cold often commences is, as a rule, but one of the earlier symptoms and is by no means the cause of the illness. The actual inflammation is usually produced by irritation of the mucous membrane and the attack of certain germs or bacteria. It is true that colds occur more frequently during the winter than during the summer, but this is probably due to the fact that in summer people spend more time out of doors surrounded by the fresh air and sunshine, which are fatal to most germs, whereas in winter they spend a greater amount of time in stuffy rooms securely protected from the outer air by closed doors and windows.

The great means for the prevention of so-called colds is the regular provision of efficient ventilation, and as a rule those persons who are accustomed to keep their windows open day and night are less liable to attacks of catarrh than are those who attempt to exclude the cold outside air.

Colic.—This is a griping pain in the intestines, and often accompanied by a painful distension of the whole of the lower region of the bowels, with vomiting, costiveness and spasmodic

contraction of the muscles of the abdomen.

CAUSES.—The complaint is produced by various causes, such as crude, indigestible fruits, long continued costiveness, cold, or it may be due, as in painter's colic, to poisoning by lead.

TREATMENT.—If caused by some indigestible article of food, a dose of castor-oil had better be taken, say a tablespoonful for an adult, to which from 10 to 15 drops of laudanum may be added. If the pain is very severe, a turpentine stupe may be applied over the abdomen.

Constipation.—This is a symptom which may be due to disease of the bowels, or to an imperfect performance of their function. Any disease, such as ulceration or cancer, which obstructs the passage of the food, will cause constipation; and any condition which produces a paralysed or sluggish state of the muscular walls of the bowel will likewise cause constipation by removing or interfering with the propelling power. With rare exceptions people can never enjoy good health while they suffer from constipation; liver complaint, dyspepsia, headache, vertigo, and piles are some of the direct results of this condition.

Of all the causes which originate and establish habitual constipation, there is none so general as inattention to regularity. Men of sedentary pursuits are naturally more prone to the error of irregular habits than practical men; hence general and local disorder of the stomach is more prevalent among them. Women often fall into the same error in the neglect of regularity. Habitual constipation is not unusual in women after a confinement, in people of a nervous temperament, and in those who lead a sedentary life. The practice of taking relaxing medicine, pills, etc., habitually, also disposes to this. In all such cases an altered diet and regular habits will nearly always suffice.

TREATMENT.—A glass of cold water taken on rising in the morning will, in some, prove efficacious. A light breakfast to those who are sedentary will favour this action. Coarse brown or bran bread is very useful; figs, prunes and ripe fruits are also beneficial; exercise in the open air and a cold sponge

in the morning are also helpful. The habit of taking an apple or an orange an hour before bedtime will often effect a permanent cure. An occasional aperient may be required, and then Friedrichshall water, in the dose of a wineglassful taken fasting, may be employed. In children a similar treatment may be adopted, with such modification as the age will require, while in infants an altered diet and a little magnesia occasionally, mixed with the milk, will suffice.

Clysters or Enemata are now in frequent use in constipation. It is not, however, advisable to use them daily. Where they are employed, care should be taken to see that the fluid is bland in its nature, such as barley-water, thin gruel, linseed tea, or milk and water. Warm water by itself has a tendency to injure the mucus membrane of the bowel. The injection of a teaspoonful of glycerine is a simple and efficacious means of relieving the bowels; also glycerine suppositories.

Constipation in Children.—Constipation in children is best treated by dieting and suitable exercise, but in no case should it be allowed to become a habit. In the matter of diet, all starchy foods should be reduced in quantity, and plenty of fruit, both raw and cooked, should be included in the menu. The child should be encouraged to drink freely between meals water and lemonade, or any fruit drinks. In many cases gentle massage of the stomach with the warm hand is very helpful. Regular active exercise is almost essential, running, skipping, and such games being excellent. Should aperients be needed, a teaspoonful of the following mixture may be given before meals; Syrup of rhubarb, four ounces; syrup of gentian, four ounces; or a teaspoonful may be given in the morning of a mixture consisting of Syrupi. Aurantii Flor six ounces, Ol. Ricini. six ounces. This mixture requires to be well shaken before taking. For older children the following mixture is useful: Calcined magnesia, six drachms; sulphur, six drachms, cream of Tartar, six drachms, oil of anise, fifteen drops. Of this a teaspoonful should be given in the morning.

Diarrhœa. like constipation, is a

symptom of disease rather than a disease itself.

CAUSES.—Exposure to cold not unfrequently gives rise to diarrhœa by driving the blood from the surface of the body to the internal organs, thus producing in the bowel an excess of blood (congestion) which is relieved by the escape of the watery parts into the bowel, and an increased production of fluid by the intestinal glands. Exposure to intense heat and over-exertion may also occasion diarrhœa. Among other causes may be mentioned malarial influences, sewer gas, decaying animal and vegetable substances, errors of diet, exhaustion, and the disarrangement of the regular habits of life.

SYMPTOMS.—Pain is usually present, often of a colicky nature, and is relieved by an action of the stomach. It is occasionally unattended by pain.

TREATMENT.—It is of great importance to ascertain the cause, and if possible, remove it. Give the body rest and administer bland food such as milk, arrowroot or cornflour. If caused by some undigested food, give a dose of castor-oil with 10 or 15 drops of laudanum for an adult. Apply a mustard poultice or mustard leaf over the abdomen if there is much pain. In tropical climates, where severe attacks of diarrhœa from chills are common, a broad flannel belt should be worn round the abdomen day and night. This will prevent many chills.

Dysentery.—Dysentery is a disease of hot climates. Regions of India, Asia, the unexplored coasts of Africa, South America and the West Indies, are dysentery countries. In the United Kingdom it is rare in the epidemic form, except in military life; but it is common enough as a "scattered" or sporadic disease in the hot season to be classed properly among the diseases of summer.

The epidemic form of dysentery is thought to be due in whole or in part to miasmatic influences connected with the nature of the soil in particular regions; with this, various other exciting causes concur in producing the attack in particular cases. The precise nature of the miasma is unknown, just as the precise nature of the malarial poison was doubtful before Sir Patrick

Manson's memorable researches established a definite causal relationship between the mosquito and malaria. Unlike diarrhœa dysentery is a disease, not merely a symptom.

There is generally a varying amount of fever, with corresponding constitutional disturbance. The characteristic manifestations of the disease are distressing, twisting, colicky pains in the abdomen, with a constant tormenting desire to have the bowels moved, and violent straining and bearing-down pains; these efforts resulting in the passage of small amounts of mucus or blood, or these commingled—often nothing more. The dysenteric symptoms are usually preceded for a few days by diarrhœa. The duration of the disease is from four to twenty-one days. The acute form may run on into the chronic in unfavourable circumstances. The structural changes in dysentery consist in inflammation and ulceration of the mucous membrane of the large intestine, especially and most commonly in its lower portion, the glands being especially involved. The restriction of the processes of the disease to this part of the bowel will explain the common limitation of pain, on pressure, to those portions of the surface of the abdomen overlying the large intestine, whilst the inflammation of the mucous membrane of the bowel explains the increased secretion of altered mucus and the presence of blood in the stools. The bearing-down pains and constantly-recurring desire to have the bowels moved are due to the swollen condition of the lining membrane of the bowel, and to spasm of its muscular coat, which is, doubtless, also concerned in producing the violent twisting pains in the abdomen which characterize the disease. There is no reason to believe that this form of dysentery is contagious. It is not usually a highly dangerous malady, except in certain cases. Its course appears to be modified by judicious treatment, and the management of each case should at once be placed in medical hands. "In every case of dysentery," says Dr. Johnson, "that has ever come within the range of my observation, two functions were invariably disordered from the very outset

and soon drew other derangements in their train. These were the functions of the skin and the liver; or perspiration and biliary secretion. I defy any one who has attentively regarded this disease at the bedside to produce, a single instance in which these functions were carried on in a natural manner at any period of the disease."

The diet should be scanty, but nutritious; hot poultices with 30 or 40 drops of turpentine added to each should be applied to the abdomen and strict rest enjoined. It is desirable to remove all hardened feces which may set up irritation, and for this purpose nothing suits so well, or gives the bowels so much relief, as copious injections of warm and very thin gruel. The hardened feces having been removed, a totally different plan must be adopted; no more copious injections, but enemata of an ounce or two of starch, containing 30 drops of the liquid extract of opium; this may be repeated if necessary. At the same time it is desirable to give internally full doses of ipecacuanha, consisting of not less than from 30 to 60 grains, in any form which may be deemed desirable. The dose may be repeated in six hours, if necessary. Tonics must be given carefully, the bowels attended to, and every sign of relapse closely watched. The diet must then be nourishing, but not bulky. Remedies may be given to prevent the contents of the bowels from putrefying, such as sulphite or hyposulphite of soda or sulphocarbolate of soda, or carbolic acid. If dysentery become chronic, change of climate is important, a mild and agreeable atmosphere doing great good. Sir Charles Locock says that "in severe dysentery, especially where there is sickness, there is no remedy equal to pure calomel, in full dose," and recommends at the very outset of the disease to give the patient three to five grains (according to age) of calomel, mixed with an equal quantity of powdered white sugar and put dry upon the tongue. In three hours afterwards let the following mixture be administered:—Take of compound ipecacuanha powder, five grains; ipecacuanha wine, half a drachm; simple syrup, three drachms; cinnamon water, nine-

drachms : to make a mixture. A tea-spoonful every three or four hours, first well shaking the bottle. Dr. Baily, who made this disease his particular study, recommended, in cases where dysentery has continued for several days, a combination of castor-oil and opium—as, for instance : Take of mixture of acacia, three drachms ; simple syrup, three drachms ; tincture of opium, ten drops (not minims) ; castor-oil, two drachms ; cinnamon water, four drachms. Mix and take a spoonful every four hours, first well shaking the bottle. A warm bath, at the beginning of the disease, is very efficacious ; and a flannel bag, filled with table salt, made hot in the oven and applied to the bowels, will afford much comfort.

Eczema.—The name of eczema is applied rather widely, to cover several conditions of the skin. The word itself simply means “an eruption,” so that it may be used to describe almost any diseased condition of the surface of the body. As a rule, however, it is limited to three or four varieties, the most important of which are known respectively as eczema simplex, in which the skin is merely moist, red, and sore ; eczema impetiginodes, in which pustules are formed on the surface, which give out a fluid which dries into thick, hard, yellowish crusts : this is most often found on the head, and is most frequent in children. Eczema rimosum is a condition in which the skin becomes thick, hard, and cracked, the palms of the hands and the soles of the feet being the most frequent positions to be attacked. Eczema marginatum is usually found on the inner side of the thigh, and shows as a rounded patch with raised edges ; this is held to be of parasitic origin.

The treatment of eczema varies according to the stage which the disease has reached. In the earlier stages, when the skin is moist, hot and red, lotions should be used to soothe and cool it. Such preparations as the various lotions of borax, bicarbonate of soda, and lead, used either alone or in conjunction with powders of an absorbent nature will be found of use. At all stages the use of soap should be avoided. When the eruption is

decreasing, mild mercurial ointments, such as ung. hyd. ammon., five grains to the ounce, often do good ; at the dry and itching stage, when the skin becomes rough and scaly, pitch, creasote and all the tarry applications are useful. Poulticing, or soaking with oil, will remove the crusts, and the ointment should then be applied on strips of lint. Poulticing should be resorted to as little as possible, and washing in water always does harm. When cleansing is necessary a little milk will be found to answer the purpose with the minimum of pain and harm. Eczema often lasts a long while, and, even when apparently cured, frequently recurs again and again. Any local irritation will cause it, as will varicose veins, dyspepsia, and gout.

Flatulence.—Flatulence is an undue collection of gas or air in the stomach or bowel, generally arising from the decomposition of unsuitable foods, or from the irritation of the walls of the stomach, etc., when in an enfeebled state. It is a common and very unpleasant symptom of indigestion or dyspepsia. In a great number of instances it is due solely to temporary errors of diet, and disappears on correction. The abuse of certain articles of food, and especially of tea, is responsible for much persistent flatulence.

SYMPTOMS.—Often there is pain on the left side over the heart, and some palpitation. There may be a feeling of faintness, giddiness or choking. Eructation is a frequent symptom.

TREATMENT.—Flatulence is best treated by dieting, keeping mainly to solid food, with stale bread, or, better still, toast. Vegetables, pastry, tea and beer should be avoided. The offending article of food, if known, should of course be relinquished. Spirituous liquors should be avoided. Flatulence may often be only the symptom of dyspepsia. It may be relieved temporarily by a slight stimulant, such as aromatic spirits of ammonia, or by 15 drops of sal-volatile in water every hour or two. The following may be used with benefit : 3 drachms of bicarbonate of potash, or the same of bicarbonate of soda, 1 oz. of the concentrated infusion of calumba, and sufficient peppermint water

added to make 8 ozs. A tablespoonful of this mixture to be taken 3 times a day in water. From 1 to 2 drachms of tincture of nux vomica, with 1 oz. of the concentrated infusion of calumba and water as before added to make 8 ozs., is another useful combination. This mixture should be taken in tablespoonful doses as the other. From 2 to 5 drops of pure terebene, taken on a lump of sugar, and repeated 2 or 3 times a day, is also a most useful remedy. The best beverages for flatulent subjects are weak cocoa essences, and hot water with a little lemon juice.

Gout.—This is a complaint depending upon the presence in the system of an excess of uric acid. It may be acute (or regular) gout, showing itself in the joints and more especially in the large joint of the great toe; or irregular gout, having other and manifold manifestations. The disease is either hereditary, in which case it often misses a generation, or acquired. Excessive eating, undue indulgence in alcohol, and indolent habits will tend to produce it. Meat, especially beef, the more potent wines and malt liquors are the articles of diet most prone to originate gout.

SYMPTOMS.—Inflammation and pain in the great toe or other joints, heartburn, various skin diseases, nervous and other manifestations, protean in their variety.

TREATMENT.—Moderation in quantity of food. Less meat should be eaten, and that chiefly white meat. Sugar, sweets and pastry should be avoided, also all root vegetables. All stimulants are best given up: if any be taken, the least harmful are Hock, Moselle and Chablis. Of spirits, brandy is to be taken in preference to others. Sedentary habits should be altered, regular healthy exercise being taken instead.

MEDICINES.—In acute gout, 10 to 20 drops of tincture or wine of colchicum may be given every 4 hours, combined with 10 to 15 grains of citrate of potash or lithia. Saline Aperients; Half a wineglassful of Hunyadi, Apenta or Friedrichshall, or a teaspoonful of Carlsbad salts before breakfast are all useful. For the local pain: Fomentations with laudanum or poppyheads

constantly applied are very soothing; and the affected parts should be kept wrapped up in flannel.

In chronic gout, sensible dieting, and a course of the waters at Bath, Baden-Baden, or Aix-les-Bains will do much good.

DIET FOR GOUTY PERSONS.—The following diet table, after Haig, will be found useful by those who have a tendency to gout.

Breakfast.—A large soup-plate half full of porridge, eaten with milk, and salted. A few mouthfuls of eggs, prepared in various ways, or some mushrooms, tomatoes, or other vegetables, and occasionally fish. One or two rounds of bread, or its equivalent in toast or scones, with plenty of butter. A cup of milk, previously boiled, flavoured with tea, coffee or cocoa. Finish with a small quantity of any fruit that is in season.

Lunch.—Potato and one other vegetable, cooked in various ways, eaten with butter, fat, and various sauces. Pudding, tart or stewed fruit. Biscuit and butter, with cheese. (Biscuit, bread and breadstuffs should be eaten in considerable quantities, to compensate for the reduction of meat.) A little fruit as at breakfast. For drink, a little milk, which in winter may be warm; or water, mixed in summer with a little fruit syrup or lime juice.

Afternoon Tea.—Bread and butter and various kinds of cake, with a little milk and water flavoured with tea.

Dinner.—Soup without meat stock. Fish or an egg, or a small bit of meat. Two vegetables, with sauces, butter, or fat. Any ordinary pudding, tart or stewed fruit. Biscuit and butter, and, if the quantity of meat or fish has been small, some cheese. A good supply of fruits as dessert. For drink, water with fruit syrup, aerated waters, or a little milk, warm or cold. A tumbler of water, hot water or aerated water at bed time.

Hæmorrhoids, or Piles.—These are swellings situated sometimes within and sometimes outside the lower bowel opening. They are liable to irritation, and inflammation, in consequence of which they give rise to a good deal of suffering. *External piles* consist in a

collection of rounded hard tumours and of prominent ridges of skin situated on the outer edge of the opening. When these become irritated and inflamed they occasion very acute pain, with throbbing and a sense of great heat, and a constant desire to relieve the bowels. This affection originates in the distension of the local veins, caused by the circulation being obstructed. Piles are generally met with in persons who follow sedentary employments, and those who, in consequence of highly-seasoned foods and indulgence in alcoholic drinks, suffer from congestion of the liver. The presence within the opening of large, rounded, and soft tumours, covered by red mucous membrane (*internal piles*) is attended with more serious symptoms. These are very apt to weaken by giving rise to frequent bleedings. Persons subject to piles should carefully avoid sitting on rocks or stones, or on wet grass or omnibus seats.

TREATMENT.—The diet should be carefully regulated, and all highly seasoned dishes, alcoholic liquors and pastry avoided. Walking exercise is highly beneficial. Bathe the affected region every morning with cold water, and carefully dry and push the obtrusions in. Hazeline is a useful application in bleeding piles. Gall and opium ointment or pure vaseline smeared over the parts often give relief. A quarter-grain morphia suppository (or plug) may answer when these remedies fail. The bowels should be kept open, either by the confection of sulphur, the confection of senna, or compound liquorice powder. Purgatives containing bitter aloes and other irritants of the lower bowel should be avoided.

Heart Disease.—This is a complaint which, like cancer, is too serious and difficult to permit of self-treatment. If there is any suspicion of its existence, if there is shortness of breath, pain over the heart or running down the left arm, any labouring or irregularity in the heart's action, medical advice should be sought and carried out.

Hiccough.—The cause of hiccough is a sudden violent contraction of the diaphragm, usually brought about by irritation of the muscle,

either directly or reflexly as a consequence of indigestion. The attack may be over in a few minutes or it may last for days, or even weeks, with short intervals. In some people any sudden shock or emotion would bring on an attack of hiccough, and among those who take alcohol to excess its occurrence is very common. Where it persistently occurs hiccough is a very distressing symptom, though as a rule it is quite without danger. When, however, it occurs in a person who is seriously ill, it is generally a sign of ill omen. Among the simple remedies may be named holding the breath after a deep expiration, or drinking a glass of water with the nostrils closed, or pulling on the tongue. Of internal remedies the most effective is nitro-glycerine, given in tablet form, one-hundredth of a grain being taken as a dose; this may be repeated after a short interval. As a rule, however, it is unwise to take this drug except under medical orders.

Jaundice.—Though this is often spoken of as a disease, it is not a disease by itself, but only a symptom common to many disorders of the liver.

Liver Complaints.—The liver, like the kidneys and other organs, is liable to various acute and chronic diseases. Amongst the *acute* changes may be classed catarrh, or inflammation of the bile ducts, acute atrophy of the liver, congestion and inflammation of the liver, and the presence of gall-stones in the hepatic liver.

Catarrh of the Liver.—**SYMPTOMS.**—Jaundice, loss of appetite, coated tongue, slight sickness and a feeling of retching; the motions are pale, the urine dark, the skin and eyes become yellow, and there may be, in some cases, a troublesome itching of the skin. The pain is not in itself a very troublesome symptom, and it is generally felt, if at all, in the right shoulder-blade and along the lower edge of the liver, and is often worse on pressure.

TREATMENT.—The best treatment is first to open the bowels freely; a dose of calomel at night followed by a saline draught in the morning will generally suffice. The diet must be very light, and capable of being easily digested; all rich food should be

avoided, while milk, broth, beef-tea, toast and biscuits, or a light pudding, may be taken. No stimulants should be given, as they tend to increase the congestion of the liver. Effervescing solutions may be given with benefit, since they allay thirst and sickness; those which contain soda salts are the best, and those also which have an aperient action; for this reason effervescing Carlsbad waters are often beneficial. In 3 or 4 days a mixture containing extract of dandelion, hydrochloric acid and gentian may be given 3 times a day. The bowels must be kept open daily. Active exercise should be taken every day, if the patient can bear it; and for some time after recovery care must be taken to avoid indigestible food.

Sluggish or Congested Liver.—This is generally associated with catarrh of the bile ducts, and arises often from want of exercise, and excess in eating and drinking; but congestion may develop to inflammation in tropical countries, and end in the formation of an abscess. This may be known by the pain over the region of the liver, the swelling of the abdominal wall on that spot, and the frequent shiverings; the patient loses flesh, strength and appetite, and his skin becomes of a sallow tint. People who have suffered from this complaint generally come back to this country invalided, and if they recover from the illness, they seldom regain their former state of health. Regular exercise, and a plain and sparing diet, are the best preventatives.

Gall-Stone.—A gall-stone in the hepatic duct will cause great pain over the liver (chiefly in one spot), much sickness and intense distress, and a feeling of faintness. A hot bath and the administration of chloroform will ease the pain, or hot fomentations constantly renewed may be applied to the affected side, and 25 drops of laudanum (for an adult) in half a glass of water given, repeating the dose in two hours if the agony still continues. Jaundice will come on from the obstruction to the flow of the bile, but this will disappear when the stone has escaped from the duct into the intestine, or has become dislodged

and returned to the gall bladder, thus leaving the bile duct open.

Among *chronic* changes of the liver may be enumerated cancer, cirrhosis, fatty and waxy degeneration, passive congestion, syphilitic deposits, and the presence of hydatid cysts.

Lumbago.—This is a form of chronic rheumatism affecting the lower part of the back and loins. The individual moves stiffly and has pain in getting up from the sitting posture or in turning over in bed at night.

TREATMENT.—The application of a menthol plaster, or strapping the affected side, often gives relief. Should it be impossible to apply either of these remedies, a hot bath and wrapping the part up in flannel will be found useful. Rubbing with a compound camphor liniment containing a little laudanum often relieves. In gouty persons the diet should receive attention.

Migraine.—Migraine or sick headache is a paroxysmal disease to which certain persons are peculiarly liable. It attacks men as well as women, though the latter much more frequently. Though it appears to be primarily a nervous affection the attacks seem often to be brought about by digestive disturbance or by mental fatigue. The patient can usually tell when an attack is coming on. Various disturbances of vision are frequent at this stage, mental confusion and depression of spirits are also common premonitory symptoms. The headache usually commences at one spot, frequently on the temple or in the eyeball. It gradually spreads till the whole head is involved. A sensation of nausea with or without vomiting is frequent. There is great general prostration. The attack may last for a few hours, though severe cases frequently extend over three or four days. Perfect rest in bed, combined with quietness and darkness, is the first necessity. A smart purge may be taken, and all food should be abstained from, though water or soda-water may be freely drunk. In the way of preventive treatment attention should be paid to the general health. Regular active outdoor exercise should be taken, and the bowels should be kept well

regulated. The diet should be light and nourishing, consisting largely of milk, eggs, fruit, vegetables and fish. Tea, alcohol, cake and pastry should be entirely avoided. At the commencement of the attack five-grain tablets of citrate of caffeine or phenacetin are often helpful.

Neurasthenia.—Neurasthenia is a nervous disorder without any known alteration in the organic structure of the body, characterized by a continual state of extreme weakness and nervous prostration after the slightest exertion. There is usually considerable mental depression and inability or indisposition to perform any mental work. The weakness and fatigue are out of all proportion to any apparent cause. The symptoms indeed closely resemble those experienced during those of the early days of convalescence from an acute fever. In a large proportion of the cases there exists a curious headache, which is not so much painful as distressing, the sensation being one of pressure or fullness, so that the patients often complain that they cannot get rid of the feeling of a heavy weight on their head. The weakening of the nerve and muscular energy is of every degree of intensity. In its slighter forms it may consist merely of a sensation of tiredness after ordinary exertion, but may be insufficient to prevent the patient from attending to his ordinary business. In other cases the pain is so extreme that the patient feels unable even to raise himself on the elbow. Feeble digestion is the rule, sleeplessness also is extremely common. Neurasthenia is not a dangerous disease, and providing a suitable treatment be strictly enforced the majority of cases move steadily towards recovery. In the severe cases complete rest in bed for a few weeks, and isolation from sympathetic friends is essential. A very full nourishing diet, consisting largely of milk, should be compulsorily administered during this time. Afterwards steady and increasing outdoor exercise should be taken amid surroundings of interest, free from all worry and anxiety. Massage and cold spongings are valuable parts of the treatment throughout. The great

hindrance to the successful treatment of neurasthenia usually consists in the patient's friends. They generally either believe the disease to be imaginary, and so increase the sufferings and distress of the patient, or on the other hand, they display a foolish sympathy which is no less harmful. Nothing, as Weir Mitchell has pointed out, is more curious, nothing more sad and pitiful, than these partnerships between the sick and selfish and the sound and over-loving. The patient has pain, a tender spine, for example; she is urged to give it rest. She cannot read; the self-constituted nurse reads to her. At last light hurts her eyes; the mother or sister remain shut up with her all day in a darkened room. A draught of air is supposed to do her harm, and the doors and windows are closed. To cure such a case you must morally alter as well as physically amend, and nothing less will answer. The first step needful is to break up the companionship, and to substitute the firm kindness of a well-trained hired nurse.

Neuritis.—Neuritis or inflammation of the nerve fibres may effect a single nerve or may involve a large number of nerves, in which case it is spoken of as multiple neuritis. This last condition is especially associated with chronic alcoholism, though it is not entirely traceable to that cause. It generally attacks persons in middle life. The onset of the disease is commonly acute. The body temperature rises to 103° or even more. Tingling and numbness are experienced in the hands and feet, followed by severe burning pains in the limbs. Generally there is extreme tenderness in the muscles. Considerable muscular weakness follows, the first muscles to lose their power being those in the front of the leg and the back of the forearm. Dropping of the foot and of the wrist is the result. Generally the disease progresses for a month or so, then remains stationary for a couple of months, then, under suitable treatment, slowly improves. Should the muscles concerned in respiration become affected death frequently results, otherwise recovery is the rule. In the early stages complete rest in bed

is essential, and hot fomentations may be applied to the painful limb. Alcohol should be completely barred from the first. After the acute inflammation has subsided massage is of the greatest importance in restoring the functions of the affected nerves and muscles.

In the case of localized neuritis, that is neuritis which affects a single nerve, the cause is generally either cold, or a wound, or the extension of inflammation from adjacent parts. In this form there are usually no constitutional symptoms, the principal symptom being a stabbing pain along the course of the nerve affected. The muscles to which the nerve fibres are distributed are also involved, and there may be more or less twitching and paralysis.

Obesity.—Obesity or corpulence is a condition which especially shows itself after the middle period of life. There is no doubt that a great many people of the well-to-do classes, after they reach middle age take a steadily diminishing amount of active exercise. They do not, however, make a corresponding reduction in the amount of food consumed, and obesity certainly rarely occurs among those who lead very active lives and eat in strict moderation. Occasionally, however, cases do occur among those who are by no means indolent, and who appear to eat almost a minimum of fattening food. These, however, are exceptions. Various dietaries have been suggested for the reduction of fat, among the most celebrated being the Banting, the Ebstein, and the Salisbury diets. In the latter method it is usual to restrict the diet absolutely for a time to large quantities of rump steak, cod fish and hot water. Dr. Towers-Smith, a great advocate of this method, gave 3 lb. of rump steak and 1 lb. of cod fish, together with 6 pints of water, as the daily diet for the first fortnight. The next three weeks the hot water was reduced to 4 pints, and other kinds of lean meat and fish were allowed, as well as a little green vegetable and unsweetened rusks. This method is, however, by no means generally applicable, nor is it by any means invariably successful.

The Banting method consists mainly in limiting the amount of food taken, strictly limiting the amount of fluid taken, and excluding fats, sugar and starch. The following is typical Banting dietary:—

Breakfast at 9 a.m. consisted of 5 to 6 oz. of animal food-meat or boiled fish (except pork or veal); a little biscuit, or 1 oz. of dry toast; 6 to 7 oz. of solids in all. A large cup of tea or coffee (without milk or sugar) —9 oz. of liquid.

Dinner at 2 p.m. Fish or meat (avoiding salmon, eels, herrings, pork and veal), 5 to 6 oz.; any kind of poultry or game; any vegetables, except potato, parsnips, beetroot, turnips, or carrot. Dry toast, 1 oz. Cooked fruit, unsweetened. Good claret, sherry, or Madeira, 10 oz. Total of solids, 10 to 12 oz.

Tea, 6 p.m. Cooked fruit, 2 to 3 oz.; a rusk or two; 2 to 4 oz. of solids. 9 oz. of tea without milk or sugar.

Supper, 9 p.m. Meat or fish, as at dinner, 3 to 4 oz. Claret, or sherry and water, 7 oz.

The Ebstein dietary differs from the Banting principally in the fact that he allows fat to be eaten in moderation.

The present attitude of most physicians lies between these various courses, and agrees largely with that of Burney Yeo: "Animal foods should be strictly limited, starchy foods should be reduced to a minimum, sugar should be entirely prohibited, a moderate amount of fats should be allowed. Only a small quantity of fluid should be permitted at meals, but enough should be allowed to aid in the solution and digestion of the food. Hot water may be taken freely between meals or at the end of the digestive process." No beer, porter, wines, or spirits should be taken. An increasing amount of outdoor exercise should be taken every day, and saline purgatives should be freely employed.

It is only necessary to mention a few other details. Of animal foods, all kinds of lean meat may be taken, poultry, game, fish (eels, salmon, and mackerel are best avoided), eggs.

Meat should not be taken more than

once a day, and not more than 6 oz. of cooked meat at a time. Two lightly boiled or poached eggs may be taken at one other meal, or a little grilled fish.

Bread should be toasted in thin slices and completely, not browned on the surface merely.

Hard captain's biscuits may also be taken.

Soups should be avoided, except a few tablespoonfuls of clear soup.

Milk should be avoided, unless skimmed, and taken as the chief article of diet. All milk and farinaceous puddings and pastry of all kinds are forbidden. Fresh vegetables and fruit are permitted.

It is important to bear in mind that the actual quantity of food permitted must have a due relation to the physical development of the individual, and that what would be adequate in one case might altogether be inadequate in the case of another person of larger physique.

Peritonitis.—Inflammation of the membrane, called the peritoneum, which lines the abdominal cavity. It is usually caused by diseases or wounds of the abdomen or its contents.

SYMPTOMS.—Severe pain is complained of, increased by pressure; the knees are generally drawn up and the patient lies on his back; the abdomen is puffed up; there is obstinate constipation, and sometimes continued vomiting.

TREATMENT.—It is most essential that a doctor should be called in at the onset of the disease, for often immediate surgical treatment is the only possible means of saving the patient's life. The administration of opium, unless specially advised by the doctor, is not to be undertaken, for it will effectually mask many of the important symptoms by which the cause of the disease can be discovered, and the remedies applicable to that cause administered.

Pleurisy.—This is an inflammation of the pleura or serous membrane which covers the lungs, and lines the greater part of the cavity of the chest. It is generally brought on by exposure to cold and wet, but may

be the result of an accident in which the ribs are broken.

SYMPTOMS.—Stabbing or shooting pain in the affected side, increased by breathing deeply or coughing. The pain is usually confined to one spot, and, if the ear be placed against the side, a fine, rubbing sound will be heard, which goes by the name of "friction," and resembles that produced by rubbing a lock of hair between the finger and thumb. The pulse is quick, the tongue is coated; there is thirst and loss of appetite, and the temperature is raised. In a day or two the breathing becomes more difficult, owing to fluid being infused into the pleural cavity and pressing upon the lungs; this fluid after a time usually becomes absorbed, when the breathing grows easier. Sometimes this fluid does not become absorbed, when a slight operation has to be performed for its removal.

TREATMENT.—Place the patient in bed without delay, in a room the atmosphere of which is kept moist by allowing steam from a bronchitis kettle to pass into it; the temperature should not be below 60° F.; 63° or 64° would be better. He should not be allowed to speak more than he is absolutely obliged. Linseed meal poultices should be applied to the chest. A mustard leaf poultice or a hot poppy fomentation, will often give relief at the onset. Strips of adhesive plaster placed obliquely in the direction of the ribs will often procure rest and relieve pain. Milk, beef-tea, broth and jelly should be given in the early stage; and later, when the fever has abated, light puddings, eggs, white fish, and other light, easily digested and nourishing diet. During recovery, cold and damp must be carefully avoided.

Pneumonia.—This is an inflammation of the lung substance proper, and is caused by the presence of *Bacillus pneumoniae*. It is generally ushered in with a rigor (a sudden coldness attended with shivering), which is often very severe; in children convulsions may take the place of the rigor. The temperature rises, and may reach 104° or 105° F. There is pain and loss of appetite; the face is flushed, breathing is rapid,

and there is a short hacking cough ; the matter expectorated is tenacious and rusty-coloured.

TREATMENT.—Keep the temperature of the room at about 65° F., or rather higher, but not lower if it can possibly be avoided. Support the shoulders well with pillows ; this will assist breathing. Give milk, beef-tea, white of egg, custards, jelly, strong chicken tea, etc. Cold water may be given to allay thirst. Medical aid should be sought at once.

Quinsy, or Tonsillitis.—This is a severe inflammation of the throat, chiefly involving the tonsils and frequently going on to suppuration. It is usually ushered in by chilly feelings, which are succeeded by fever. The speech becomes nasal in character, and there is pain and difficulty in swallowing.

TREATMENT.—In the early stage this disease may be cut short by the administration of an emetic of 20 grains of powdered ipecacuanha, or by small doses of tincture of aconite frequently repeated, say, a quarter or half a drop every 15 minutes or half-hour till the patient is in a good perspiration, when the medicine may be given less frequently. A mixture containing the following ingredients may be given with advantage : Steel drops, 3 drachms ; sulphate of quinine, half a drachm ; chlorate of potassium, 2 drachms ; glycerine, half an oz. ; water added to make 8 ozs. A tablespoonful in water every 4 hours. The food should consist of milk, eggs, beef-tea, cocoa, etc. ; pieces of ice may be given to suck. A medicated spray will afford much relief and is preferable to gargling. Sprays can now be bought very cheaply.

Rheumatic Fever.—This disease begins with restlessness and fever ; there is a white or creamy condition of tongue, and the bowels are deranged. Presently the joints begin to ache, the pain increases till there is great swelling and tenderness over one or more of the large joints of the body ; the temperature rises, and, in some cases, becomes excessively high ; the urine deposits a thick brickdust sediment on cooling. As there is a great risk of the heart becoming affected in

this disease, it must always be regarded with apprehension, and medical advice procured at once.

TREATMENT.—Absolute rest in bed must be enjoined, and careful nursing and light, nutritious diet provided. Milk and potass water, alone or together, should be given. Beef-tea and beaten-up eggs are important items in the diet. The following medicine may be usefully given Salicylate of sodium, 3 drachms iodide of potassium, half a drachm water added to make up to 8 ozs. A tablespoonful of this mixture to be given every 3 hours. The joints should be wrapped in cotton wool, and the patient wear woollen in preference to linen articles of clothing next the skin, since profuse sweating is often a characteristic feature of the disease.

Rheumatism.—Chronic rheumatism is a term used to include any chronic inflammation of fibrous tissue, especially that of the muscles, ligaments, and nerve coverings, which is caused by the specific rheumatic germ. The principal symptom is pain, which is almost invariably increased by any movement. It is also increased by such influences as exposure to cold and indigestion. Chronic rheumatism of this type is very common among middle-aged people, especially among the poor. Generally no alteration in the appearance of the joints can be detected, but a crackling sensation can often be felt when the joint is moved. The joint, however, is stiff and painful on movement and there is a dull, aching pain, which is worse at night or in damp cold weather. When the muscles are affected the symptoms are more marked. The pain is usually more severe, and comes on suddenly. There is great stiffness of the muscles, with considerable tenderness. As a result of this the patient keeps the affected part as much at rest as possible. In the way of treatment a calomel purge may be taken at the onset, which may be followed by a Seidlitz powder next morning. In the acute stage, when the pain is severe, fifteen grains of salicylate of soda may be taken every three or four hours, the parts being kept completely at rest until the acute stage is past. After a

few days fifteen minutes' gentle massage should be given three times daily. In the way of prevention sufferers from muscular and chronic rheumatism should follow Dr. Symes' advice and make every effort to improve the general health and muscle tone by judicious exercise in the open air—walking, riding and golfing. The bowels should be regulated by means of cascara sagrada or compound liquorice powder, and occasionally a mercurial pill should be taken. Turkish baths taken systematically may prevent the recurrence of attacks. If the tonsils be large, or the seat of chronic inflammation, they should be removed, and chronic rhinitis or pharyngitis should be corrected. Warm underclothing of wool is important; cold and damp, and especially the combination of the two, should be avoided. As indigestion not unfrequently precipitates an attack, the diet must be carefully regulated. The food should be plain, and the quantity of carbohydrates, sugar, sweets and potatoes should be limited. The amount of fluid must be in excess of the normal, and should be taken as far as possible on an empty stomach. A tumblerful of hot water before breakfast and on going to bed, and half a tumblerful half an hour before two meals in the day should be taken in addition to drinks taken with the meals. Ale, cider and stout are not suitable for persons subject to recurrent attacks of muscular or articular rheumatism. Residence in a dry, warm inland climate is desirable.

Stammering.—Stammering and stuttering, though commonly confused, are not identical. Stammering is due to one or both of two causes, spasm of the muscles of the lips and tongue or of those governing the supply of air needed for the emission of sound, or imperfect co-operation of the muscles used in speech.

Stammering is a spasmodic arrest of speech due to one of these causes, whilst stuttering is the spasmodic repetition of words or the first syllables of words. The latter is the less common impediment to speech, and is also the more difficult to cure. The first step in the treatment is to

discover which part of the mechanism is at fault, and to endeavour by means of suitable exercises, respiratory and other, to restore the muscles to their normal state. The symptoms of the ailment are very helpful in determining the proper treatment; as for example, in the case of stammering due to spasm of the cords which control the exit of the breath. In this case the patient may stand speechless and breathless for several seconds, and when the spasm relaxes he will pour out his words in a rapid stream, so as to pronounce as many as possible before the next intake of breath, which may entail a recurrence of the spasm. In these cases respiratory exercises are obviously needed, and the patient should be made to draw deep and even breaths for a specified time daily. In the case of imperfect co-operation between the respiratory and articulating muscles the patient will place his mouth and throat muscles in position for pronouncing the desired word, but at the proper moment the respiratory muscles do not permit the escape of the necessary amount of air for the production of sound. The word is perfectly shaped, but the sound is wanting. It is a curious fact that stammering is five times more frequent in boys than in girls.

Stammering children should always be examined to make sure that there is no mechanical impediment, such as adenoid growths, to be found. Such should of course be removed if present. These are, however, very rarely the sole cause, though they may be contributory.

Dr. Guthrie points out that in the great majority of cases the fault is respiratory. The patient must therefore be instructed in the first place how to increase the vital capacity of his lungs by exercises such as those suggested above. He must also be taught to control the exit of his breath, first without, and secondly together with vocalization. He must learn to vocalize his vowels with steady prolonged resonance, and to direct his attention to this, rather than to articulation. He must intone the vowels, and be shown how to introduce the consonants meanwhile, as for instance

In uttering the sound O-Mo, O-Do, O-To, etc. He will thus learn that vocalization of vowel-sounds aids in giving utterance to the consonants over which he stumbles.

Sunstroke.—The disorders produced by exposure to excessive heat have been classified by Gihon under two heads, heat exhaustion and heat apoplexy. Heat-exhaustion is a common form in temperate latitudes, and its approach is indicated by gradually developed premonitory symptoms of dizziness, headache, drowsiness, nausea, and faintness, with coldness, clamminess, and pallor of the surface, pupils normal or dilated, frequent, feeble, irregular pulse, sighing respiration, and later complete syncope, terminating fatally unless active medical interference take place, in which case recovery is the rule. The loss of consciousness is never so complete as in heat-stroke proper. In midsummer it is not unusual to see labourers, drivers, and others who have fallen in the streets, and who, if judiciously placed in the shade near by and treated on the spot, are soon able to return to their homes.

Heat-apoplexy has the characteristics of ordinary apoplectic seizures, for which it may be mistaken: flushed face, injected adnatae, full, rapid pulse, visibly bounding carotid and temporal arteries, and stertorous respiration. Often there is no premonition, or merely lack of sweating, dizziness, flashes of light or red and yellow or clouds before the eyes. The victim falls and is picked up unconscious, and death, if it be not sudden, occurs after a brief period of convulsions, coma, or asphyxia, unless averted by treatment or should this be ineffectual.

Sunstroke is commonly preventable by proper precaution. While the necessities of labouring men compel them to work under all conditions, they should be admonished against the black felt hats, thick flannel shirts, heavy trousers, and unnecessary waist-coats and jackets with which labourers clothe themselves in the most sultry weather. Treatment should be immediate. Gihon points out that cases of heat-stroke proper are greatly

aggravated by neglect of immediate treatment and by being hastily put into an ambulance and jolted off to a hospital, when a few buckets of cold water, ice to the head, would have contributed to recovery. Excess of heat being the morbid agent, the manifest indication is to reduce that abnormal heat as quickly as possible, and the easiest and most effectual way of accomplishing this is by the application of cold water, which not only directly abstracts heat but by absorption furnishes material for refrigeration through evaporation.

Syncope.—Syncope is a term indicating the failure of the heart, leading to a loss of consciousness, and sometimes to death. Among the principal causes are lack of blood in the cavities of the heart; following on severe haemorrhage or sudden removal of pressure from the great blood vessels, as has occurred in certain operations; insufficient supply of blood to the heart walls; or a supply of impure blood, as may occur in certain fevers, or as a consequence of breathing the impure air of a crowded room, and various diseases of the muscles and valves of the heart. Syncope may occur quite suddenly and cause instantaneous death, or it may be much milder in its symptoms and gradual in its onset. When it comes on gradually there is a sensation of faintness and giddiness with more or less nausea, or actual vomiting. The body usually becomes covered with cold clammy perspiration. The breathing becomes hurried and gasping; the mind becomes confused, and ultimately complete unconsciousness results. There is great pallor, and the pulse becomes almost imperceptible. The breathing is slow and irregular. The treatment consists in at once laying the patient flat on the floor or on a bed, with the head low. All clothing about the neck and chest should be loosened, fresh air should be freely admitted. The nostrils may be stimulated by the vapour of ammonia, and, if the patient is sufficiently conscious to swallow, one or two tablespoonfuls of brandy may be given him through the mouth.

COMMON COMPLAINTS

Abscess.—A circumscribed inflammation ending in the formation of matter which has to be discharged either by breaking through the skin or being let out by an incision. May occur in any part of the body. Should be ripened by poulticing or fomenting. When the abscess "points" an incision should be made in the softest spot, and the matter evacuated.

Acidty.—Give equal parts of lime-water and milk; or 10 to 20 grains of magnesia may be given in a little milk 3 times a day. The following mixture is useful in this affection: bicarbonate of soda, 3 drachms; subnitrate of bismuth, 2 drachms; water, 8 ounces. Shake the bottle, and take 1 tablespoonful 3 times a day.

Ague.—Give 4 or 5 grains of sulphate of quinine every 4 hours during the interval of the fit.

Appetite, Failure of.—For loss of appetite, accompanied by constipation of the bowels, pain in the stomach, especially a feeling of fullness at the pit of the stomach after eating, with broken and unrefreshing sleep, regular outdoor exercise, the avoidance of tea, cake, pastry, and alcohol, and the regulation of the bowels by means of aloes pill are called for.

Baldness.—This may be due to impaired nutrition in the scalp, or to a scurfy condition of the skin. In the first case a stimulating lotion should be used. 3 drachms of tincture of cantharides, 6 drachms of tincture of quinine, 4 drachms of sal-volatile and water to 8 ozs. Apply to the roots of the hair. If the head is scurfy use as a shampoo a mixture of soft soap 3 parts and eau-de-Cologne 1 part. If the scurf persists, it is probably due to a complaint called seborrhoea, which will require skilled attention.

Barber's Itch, or Syccosis.—An affection of the hairy parts of the face, and particularly the chin, the disease sometimes also involving the eyebrows, eyelashes and other parts of the person. It is often due to a foul shaving-brush or razor, whence its popular name. It is caused by microbic infection. Papules form round the hairs and develop into pustules, each pierced

by a hair. As the inflammatory process advances the hairs become loose and fall out, a drop or two of pus following each. As the pus dries, brown or yellow crusts form. The disease is contagious, spreading from one follicle of hair to another. The sufferer must be patient, as syccosis may be very obstinate. The treatment consists in removing the crusts with bread-and-water poultices, extracting the hairs over the whole of the affected area (they are all diseased) and applying soothing and antiparasitic remedies. Sir Malcolm Morris recommends oleate of mercury (1 to 2 per cent.), or weak sulphur ointment in mild cases and resorcin ointment (2 to 10 per cent.) in severer. Carbolated vaseline is an excellent antiseptic dressing that can readily be applied. Ointments having a lard base should be avoided, since such substances are breeding-grounds for pus germs. For some time after apparent cure shavers should use a 1 in 1000 bichloride of mercury solution in their lather water, and apply pure lanolin to the face every night.

Bed Sores.—Clean the sores thoroughly with carbolic lotion 1 part in 40 of water, and then apply zinc oxide ointment. Avoid pressure on the affected part by means of a ring-shaped pad.

Bilious Attacks.—A bilious attack being essentially a digestive disorder, the process of digestion being practically arrested for the time, and the appetite completely lost, the first principle of rational treatment consists in entire abstinence from food. The lining wall of the stomach becomes covered with mucus, and the micro-organisms which cause or accompany fermentation are very active. It is therefore important to take steps to wash out the stomach by taking large draughts of water or soda water, to get rid of the undigested fermenting material by means of purgatives, and to control the processes of fermentation by means of antiseptics. The following pill may be taken at night: pil. hydrarg., three grains, ext. aloes, one grain, ext. hyoscyam, one grain. This should be followed the next morning

by a Seidlitz powder or a drachm or two of Epsom salts. No alcohol in any form should be taken. If the patient is willing to rest, to take no food whatever, to drink a couple of quarts of water or soda-water in the day, and to take the pill and saline draught advised above, a bilious attack in most cases passes off in twenty-four hours or less. Indeed, by adopting the treatment when the attack is threatened and before it has actually developed, the more unpleasant symptoms may generally be avoided altogether.

Blackheads, or Acne.—The constitutional treatment of acne should not be neglected; greasy and fatty foods, as well as cheese, pastry, sweets, pickles and tea, should be avoided. Starchy foods, such as bread and potatoes, should only be taken in moderate quantities. The face should be scrubbed with hot water and soap every day, and the contents of the spots should be squeezed out every night. The following lotion may be well rubbed into the skin at bed-time:—

Zinc Sulphate . . .	↓	drachm.
Precipitated Sulphur . . .	↓	"
Potas. Sulphurat. . .	↓	"
Water to . . .	4	ounces.

When the skin peels as a result of this lotion, a little carbohc acid ointment may be applied.

Bleeding from Nose.—A considerable discharge of blood from the nose is usually preceded by chilliness, coldness of the limbs, weariness, pains of the back and head, costiveness, frequent, full, and sometimes hard pulse, with heat, fullness, and tension about the nose, strong beating of the arteries of the head and neck, and flushing of the face; but, occasionally, bleeding from the nose, like all other bleedings from constitutional causes, makes its appearance without any preceding symptoms, especially when it is inconsiderable. Whatever are the symptoms preceding this flow of blood, the chief cause generally lies in an unhealthy condition of the constitution, or in a confined state of the bowels. The former seems to obtain most frequently in adults, and the latter in children. It is very seldom dangerous.

TREATMENT.—In the treatment of

this discharge of blood, it is necessary we should first consider whether it be owing to a plethoric or a debilitated state of the body, and whether it appears to afford relief from any previous unhealthy symptom, or is attended with manifest injury. For, in full habits, where there is considerable corporeal vigour, it is generally attended with advantage, and our principal regard should be paid to prevent its continuing too long, or being too profuse; while in weakly persons it is frequently hurtful, and, for the most part, requires to be checked without delay. If, then, a considerable hæmorrhage from the nose occur in a young or middle-aged person, in whom no weakness is apparent, but rather a sufficient circulation of blood, the best and most proper remedies will consist in local astringents and emetics. The face may be frequently immersed in the coldest water, and the temples, or even the whole head, be surrounded with a band or napkin moistened with it, and frequently changed. Cold applied to the back by means of cold cloths or any cold metal, such as a bit of iron, will frequently succeed; or cold water and vinegar may be thrown up the nostrils with a syringe. These means will seldom fail to check the flow of blood; but when they do, an emetic of twenty grains of ipecacuanha powder may be administered in water, which is often a powerful remedy. Plugging the nostrils with cotton wool or antiseptic gauze may be necessary.

Bolls.—Brush tincture or liniment of belladonna over them before they are broken, to cause them to abort; this may be done night and morning. If very painful, and not likely to be thus got rid of, use hot boracic fomentations.

Bunions.—Inflammation of the tissues over the great toe joint, with enlargement of the bone itself, partly real, and partly apparent, due to the pushing of the great toe towards the second toe, and consequent semi-dislocation.

CAUSE.—Short or tight boots, high heels and pointed toes.

TREATMENT.—Rational boots with straight inside edge of sole from heel to toe, and fully large. Instruments and splints of many kinds, intended to keep

the great toe in its proper position, have been devised. Inflammation to be treated with soothing fomentations and rest. Bad cases require operative treatment.

Carbuncle.—Apply belladonna, as recommended in the treatment of boils, or, better still, use hot fomentations till the core is discharged. Attend to the bowels, and give as good diet as the patient can digest.

Chapped Hands.—Rub them with lanoline or glycerine at bed-time, and put gloves on. If glycerine is used the hands should first be washed in warm water, partly dried on a warm soft towel, and the glycerine applied immediately. This saves much smarting.

Chilblains.—Paint them with tincture of iodine, or apply camphor ointment to them. See that the boots are watertight, and do not pinch the feet.

Chill.—A chill may result in cold in the head, cold in the throat or wind-pipe, cold in the lungs (bronchitis), or cold in the stomach or bowels.

GENERAL TREATMENT OF CHILL.—A hot bath before getting into a warmed bed, followed by a hot drink of either gruel or wine and water. One or two grains of calomel or blue pill, followed by a Seidlitz powder in the morning. If at all feverish the patient should stay in bed next day, when the effects of the chill will probably pass away.

Cold.—A cold, of which catarrh is the most prominent symptom, is, perhaps, the most frequent malady in this country. Its causes are as numerous as its consequences, which vary from slight temporary inconvenience to speedy death. Colds are very frequently felt to date from some particular period, but frequently their onset is not noticed for a time.

SYMPTOMS.—The preliminary symptoms are shivering and sneezing, with lassitude, pains in the back, loins and limbs, with tightness of the forehead, and an unnaturally dry state of the lips and nostrils. These are quickly followed by excessive acrid discharge from the nostrils, which later becomes mucous or even purulent. There is hoarseness and slight sore throat, watering of the eyes, feverishness, loss of appetite, furred tongue, thirst and quick pulse. Sometimes small vesicles,

called herpes, appear on the lips or about the nose. These symptoms do not last long; they either pass away, or become aggravated if the inflammation passes onwards into the interior of the lungs.

TREATMENT.—Put the feet in hot water, and, if an adult, take 10 grains of Dover's powder, a cupful of gruel, and then go straight to bed. The following is also useful, and may be taken instead of the Dover's powder: Sweet spirits of nitre, 20 drops; Mindeterer's spirit (acetate of ammonia solution) a teaspoonful; camphor-water sufficient to make 1 oz.; to be taken as a draught at bed-time. Ten to 15 drops of spirit of camphor taken on a lump of sugar, and repeated in 2 or 3 hours, is also a useful remedy in cases of cold. As the debility is real, the diet should be stimulating.

Congestion.—By congestion is meant a dilatation of the blood-vessels over a particular area. Its commonest manifestation is in the act of blushing. There may be general congestion of the internal viscera, as is often seen in plethoric persons, but more commonly it is one particular organ or part which is affected in this way. The liver in particular is subject to congestion. In this case alcohol and all highly seasoned food should be avoided, and moderate purgation should be resorted to. Very similar treatment should be adopted in the case of congestion of the kidneys; though in this case it is also most important to bring about a free action of the skin by means of warm baths and the drinking of large quantities of warm liquids. Congestion of the lungs is often the first stage in pneumonia, and should be treated in a similar way to this disease. There is, however, another type of congestion of the lungs which is even more serious. It often occurs in the last stages of exhausting fevers, as well as of various complaints of the aged. It is known as hypostatic congestion, and is due simply to the action of gravity. Owing to the patient lying continuously on his back, and at the same time owing to the lack of tone in the blood-vessels, the blood collects in the back portions of the lungs. In all cases where this condition may be anticipated it is therefore a

good plan to roll the patient over first on one side and then on the other for two or three hours daily, so as, at any rate to some extent, to relieve the congested area.

Corns.—Corns are chiefly caused by friction.

TREATMENT.—Cold water dressings at night till the corn is soft enough to be extracted by the root. Circular, felt corn plasters are useful to remove pressure. Touching repeatedly with strong acetic acid sometimes destroys corns. Boots should not be tight.

Cramp.—The cramp is a sudden and rigid contraction of one or more muscles of the body, mostly of the stomach and limbs, which is vehemently painful, but of short duration. The parts chiefly attacked with cramp are the calves of the legs, the neck and the stomach. When the muscles are affected, they feel as though they were puckered and drawn to a point, or seem to be writhed and twisted into a hard knot; the pain is agonizing and frequently produces a violent perspiration. If the stomach be the affected organ, the midriff takes part in the constriction and the breathing is short and distressing.

The usual causes are sudden exposure to cold, drinking cold liquids during great heat and perspiration, eating cold indigestible fruits, overstretching the muscles of the limbs, and the excitement of transferred gout. Cold night air is a common cause of cramp, which is also a still more frequent attendant upon swimming.

TREATMENT.—When it occurs in the limbs, warm friction with the naked hand, or with a stimulating liniment, will generally be found to succeed in removing it. Where the stomach is affected, brandy, ether, laudanum or tincture of ginger, affords the speediest means of cure. In cramp in the stomach a dose of brandy and opium, with mustard cataplasms to the feet, will frequently relieve the patient.

Cough.—Cough is an exceedingly troublesome symptom of very various diseases. It may arise from irritation of the air-passages or of the lungs; from aneurism, or from heart disease; or it may be connected with indigestion, or be merely hysterical and due

to no cause in particular. When a man has a tickling sensation in the throat, causing a cough, the most important question is, Does it arise from the condition of the throat itself, from the stomach or from the lungs? and he should act accordingly, by addressing the remedies to whichever of these points give rise to the tickling. Persons often cough half a night, or lie awake for hours in consequence of having eaten something which did not agree with the stomach, generally some unusual thing, or from having eaten a late or heavy supper, or having eaten moderately, but while greatly fatigued. Sometimes, as in whooping-cough, cough constitutes the main part of the disease. Cough is mainly due to a kind of reflex or reflected irritation, the source of which may be in the lung or out of it, though most frequently in it. This, conducted by some nerve or other to the breathing nerve-centre, sets up violent expiratory efforts, whilst at the same time the chink between the throat and the windpipe is nearly closed. These efforts are renewed until all the available air is exhausted in the chest and the patient is forced to desist until he can draw a breath. To a worn patient, as one in an advanced stage of consumption, such attacks of coughing are inexpressibly wearing and to be avoided at all hazards. On the whole, the best thing for this purpose is a regulated temperature, as far as it can be kept even, and inhalation of steam is advisable. Where there is a soreness of throat, the best means of relief is surrounding the neck with an envelope of wetted linen or cotton, oil-silk and thick flannel, each in the order mentioned. This, too, is the best application in the croup cough and breathing with which children are apt to be suddenly attacked at night. As there is always a great dryness of the throat, a draught of water should also be given. A teaspoonful of salt in a tumbler of water will serve as a good gargle, where there is a disagreeable irritation, leading to a constant hacking. Ordinary coughs will seldom require more than a frequent sipping of gum-water or linseed-tea. If apparently coming deep from the chest, the application of a fomentation, prepared like

the envelope of linen, oil-silk and flannel, for the throat, though larger, is the best.

Brown-Séguard gave the following directions:—"Coughing can be stopped by pressing on the nerves of the lip in the neighbourhood of the nose. A pressure there may prevent a cough, when it is beginning. Sneezing may be stopped by the same means. Pressing also in the neighbourhood of the ear may stop coughing. Pressing very hard on the top of the mouth inside is also a means of stopping coughing. And I may say the will has immense power, too."

The treatment of cough which is accompanied with disease of the lungs is best described under the heading of those diseases, but there are many cases of cough independent of serious organic disease, which yield to appropriate treatment. Many cases of cough are caused by the irritation set up by obstruction in the nose, or bad teeth; such cases naturally improve when the nostrils or the teeth have been attended to. Dryness of the throat is another frequent cause of cough usually sudden and impulsive in character. Such coughs are best treated by means of glycerine pastilles or a gargle containing one drachm of glycerine to the ounce of water. Then again, especially among children, digestive trouble often gives rise to a very unpleasant barking cough. An occasional dose of rhubarb or cascara, with attention to the diet, generally puts these cases right. People who live in towns often suffer from a cough due to the constant inhalation of irritating particles contained in the air. Nothing much can be done for these cases, unless it be to remove them to purer air. The cough which accompanies an ordinary catarrh of the wind-pipe or "cold in the chest" is relieved by the following mixture: vinum. antimon. one drachm; vin. ipecac. one drachm; spirit aeth. nit. three drachms; syrup. lemon. six drachms; Liq. am. acet. twelve drachms; mist. amygdal. to six ounces. Two tablespoonfuls of this mixture may be taken every three or four hours.

For the cough attending a common cold, the following is said to be the best, safest, and cheapest cough syrup

ever made:—Take one ounce of thoroughwort, one ounce of slippery elm, one ounce of stick liquorice, and one ounce of flax-seed; simmer together in one quart of water, until the strength is entirely extracted. Strain carefully, add one pint of best molasses and half a pound of loaf sugar; simmer them all well together and, when cold, bottle tight. As a general rule, it is best not to stop a cough, especially in children. Dr. Chavasse remarks, "Any fool can stop a cough, but it requires a wise man to rectify the mischief. A cough is an effort of nature to bring up the phlegm which would otherwise accumulate and in the end cause death. Again, therefore, let me urge upon you the immense importance of not stopping the cough of a child. Ipecacuanha wine will, by loosening the phlegm, loosen the cough, which is the only right way to get rid of a cough. Thousands of children are annually destroyed by having their coughs stopped."

Deafness.—This may be caused by an accumulation of wax in the ear passage. This can generally be seen, and can be removed by syringing with warm water. Before doing so, 2 or 3 drops of glycerine, or bicarbonate of soda, 15 grains to the ounce of water, will, if dropped into the ears for a couple of days, twice daily, much expedite matters. Other causes of deafness are trouble in the middle ear, or catarrh of the eustachian tube, both of which require skilled medical attention.

Diabetes.—Diabetes is a disease characterized by a considerable discharge of urine, for the most part excessive, having a faint apple smell and sweet taste, accompanied with great thirst and general debility. The quantity of urine evacuated by diabetic patients is generally profuse and, in some instances, has amounted to the astonishing increase of sixteen or even thirty quarts in twenty-four hours. The distinguishing sign of diabetes is the presence of sugar in the urine. Every excessive urinal flow unaccompanied by this symptom belongs to, or forms a different complaint, and is very generally the consequence of some nervous disorder, or of a simple relaxation of the uriniferous tubes.

This disease is occasionally to be met

with in early life, but generally occurs at a more advanced period, especially in constitutions broken down by intemperance. The predisposing and exciting causes are chiefly such as debilitate the general system, as the abuse of spirituous liquors, cold applied to the body, immoderate evacuations, crude unwholesome diet and the excessive use of mercury. It is at present a moot point whether the liver or the blood is at fault in this disease, nor is it yet settled what part the nervous system may play in this affliction, but it is an ascertained fact that irritation in certain parts of the brain will produce sugar in the urine. The kidneys are not the seat of mischief; they merely allow the sugary urine to pass, and in so doing suffer more or less in the process.

Diabetes often makes its approach insidiously and may arise to a considerable degree and exist for some weeks without being particularly attended to. It is accompanied generally with a most voracious appetite; an insatiable thirst; a dry, harsh skin; a clammy tongue; a sense of weight, or even acute pain in the loins; and frequently with a hay-like scent or odour issuing from the body. The kidneys discharge a fluid usually very limpid and large in quantity, though sometimes tinged with green like a diluted mixture of honey and water, and possessing a sweet taste more or less powerful; the pulse is quicker than in health; the flesh wastes rapidly; and, in a very advanced stage of the disease the feet and legs swell and the skin becomes cold and damp. A troublesome costiveness is frequently present and sometimes an affection of the lungs.

The treatment of diabetes generally consists in placing the patient upon a diet from which all starchy or saccharine articles of food are rigidly excluded.

Dr. Burney Yeo, in his *Manual of Medical Treatment*, succinctly summarises the food indications as follows: (1) Avoid all substances containing starch or sugar; (2) Give as much animal food—butter's meat, poultry, fish—as can be comfortably digested and assimilated, with the exception of liver and oysters; (3) Replace the prohibited carbohydrates by suitable

substitutes from amongst the various animal and vegetable fats and oils; (4) In the case of stout and well-nourished diabetics, encourage muscular exercise in order to consume the excess of sugar in the blood, but be careful not to push this to the extent of fatigue. A return to ordinary diet after a cure has been apparently effected is a cardinal blunder. Diabetics must learn to accommodate themselves to a stringently modified diet on the lines indicated for the rest of their lives. That way and that way only lies length of days. It will be useful to exhibit a list of tolerated articles of food and drink and a list of forbidden articles.

FOOD AND DRINK ALLOWED IN DIABETES.—Butcher meat: Ham, bacon and tongue: Poultry and game: Fish: Meat extracts, soup and preserved provisions, in the preparation of which sugar has not been used: Jellies without sugar: Eggs: Cheese, butter, cream: Diabetic substitutes for bread: Saccharine: Cabbage, endive, spinach, broccoli, Brussels sprouts, lettuce, watercress, cucumber, mustard and cress, spring onions: Nuts: Tea, coffee cocoa (from nibs), either unsweetened or sweetened with saccharine: Water: Soda, Vichy, Carlsbad, Bourboule, Apollinaris, claret, burgundy, dry sherry, sauterne, chablis, dry champagne, brandy and whisky (in small quantities unsweetened): Milk (very sparingly): Fresh lemon-juice: Bitter ale.

FOOD AND DRINK FORBIDDEN IN DIABETES.—Liver: Oysters and shellfish: Sugar, treacle, preserves: Bread: Oatmeal: Biscuits: Sago, tapioca, rice, arrowroot: Macaroni, vermicelli: Pastry, farinaceous puddings: Potatoes, carrots, parsnips, beans, peas: Sweet and preserved fruits: Sweet and sparkling wines: Malt liquor: Cider, lemonade, ginger-beer, liqueurs: Cocoa, chocolate: Sweet spirits: Ices.

The most usual substitutes for ordinary bread are gluten bread, bran bread, soya bread, almond cakes and torrifed bread. The last consists of thin slices of ordinary bread toasted before the fire till they are not only browned but almost blackened, to destroy the starch and gluten.

Dropsy.—Dropsy may be due to heart disease, Bright's disease or disease of the liver. It must be treated by a medical man.

Dyspepsia.—Give 10 grains of the sub-nitrate of bismuth and the same of bicarbonate of soda 2 or 3 times a day. One teaspoonful of Benger's Liquor Pancreaticus may be taken with advantage an hour or two after each meal; it will materially assist digestion. The diet should be carefully regulated, and all indigestible articles of food avoided.

Earache.—Sponges wrung out of hot water should be applied over and behind the ear. Drop a few drops of warm oil or warm oil and laudanum into the ear. If the pain is persistent for more than two days, medical attention should be procured.

Ear Discharge.—The ear should be gently syringed with warm water, in which a little boracic acid has been dissolved, a teaspoonful to a teacupful of water. A little of the same powder should be afterwards puffed into the ear.

Enlarged Glands.—These are nearly always due to some source of irritation in the neighbourhood of the glands. In the case of enlarged glands in the neck, trouble will be found in the scalp, ear, nose or throat.

TREATMENT.—First attend to the exciting cause. In some delicate children, glands enlarge very readily. In these cases cod-liver oil, steel wine, plenty of fresh air, good feeding and warm clothing are required, with a change of air if possible. The disappearance of the glands may be accelerated by painting them with tincture of iodine. If the glands become red, painful and inflamed, medical advice should be at once obtained.

Epilepsy.—Give bromide of sodium in 20-grain doses in water 2 or 3 times a day.

Eyes.—Sore or inflamed eyes should be bathed with boracic acid lotion (a teaspoonful to a pint). This is soothing and antiseptic. A good extempore substitute is a very weak infusion of tea leaves.

Face Burning.—Exposure of the complexion to intense sun or to snow reflection, as in Alpine climbing, may

produce severe burning and blistering. Preventive measures should be taken, the best of which is to thickly coat the face with cold cream or prepared lard. Severe burning may require treatment by powdering the face with boracic acid powder, or flour, and wearing a linen mask, to prevent exposure to the air. Glycerine and cucumber and glycerine are useful for mild cases.

Foul Breath.—This may be due to decayed teeth, to disease of the nose or throat, or to defective digestion. Much may be done by careful cleansing and disinfecting the mouth and nose. The following may be used as a mouthwash, or for syringing the nose: carbolic acid, 1 drachm; eau-de-Cologne or lavender water, 2 drachms; and water, to 8 ozs. It is of primary importance to ascertain the cause of the offensive breath, and to treat that.

Freckles.—There is no convenient preventive treatment when a natural predisposition to freckles exist. Such external remedies are of service in diminishing the intensity of the discoloration as act on the epidermis and thus remove the excess of colouring matter. Among these may be mentioned several preparations of mercury, subnitrate of bismuth and milk alkaline applications, as solutions of carbonate of soda, or of carbonate of potash. These, variously combined with emulsion of almonds and tincture of benzoin, form agreeable remedies, which should be perseveringly used. Better results are obtained by the prolonged use of mild remedies than by strong applications. Freckles may be rapidly removed by using applications of such strength that their continuous action for some hours gives rise to the formation of minute blisters. The pigment may be carefully removed with the epidermis forming the roof of the blister. The epidermis which re-forms over the surface thus treated will be found to be free from excess of pigment. This process is not to be advised, however, as the benefit is of short duration, and, in unskilful hands, permanent injury to the skin might result. Various ointments are recommended; they contain stimulating substances and act by exciting a rapid formation of the superficial elements

of the skin and their correspondingly rapid shedding (exfoliation), and should only be used under the observation and advice of a medical man.

Gottre, also called Derbyshire Neck and Bronchocele, an obscure affection of the throat, usually showing itself in the form of an enlargement of the thyroid gland in front of the windpipe. Its causation has not yet been definitely ascertained. It is much more common in women than in men, and seldom found in young children. Frequently gottre is little more than a fullness or swelling at the throat, though it may rapidly increase in size, during menstruation or disorder of the health. Sometimes removal from the native air and locality suffices to effect a cure and in any case change of scene is a necessary preliminary. Iodide of potassium, either in the form of a mixture (40 grains of the iodide; one ounce of syrup of orange-peel; water to eight ounces; mix and take two tablespoonfuls thrice a day), or a 5-grain tabloid (thrice a day), is one of the best remedies, while the swelling may be painted with tincture of iodine or freely treated with iodine ointment. The gottre known as Graves's Disease, or Exophthalmic Gottre, is characterized by palpitation not only in the heart region, but all over the body, enlargement of the thyroid and great protrusion of the eyeballs, which frequently look as if they would fall out of the head and cannot be wholly covered with the lids during sleep. The belladonna mixture (tincture of belladonna, 15 minims, water to two ounces; mix and take a teaspoonful every quarter of an hour for one hour and afterwards once an hour for a short period) is the most efficacious treatment. The anæmia which so frequently accompanies gottre must be treated with one of the preparations of iron.

Gravel.—Gravel or sand in urine is due to an excess of uric acid in the system. A gouty tendency, too much rich food, and a sluggish liver will cause the excess.

TREATMENT consists in adopting a plain, light and spare diet, avoiding sweets, creams, wines, malt liquors and much red meat, and in taking plenty of demulcent drinks, such as

barley-water or milk and soda. A dose of Carlsbad salts in the morning, with a mild mercurial pill ~~over~~ ^{at} night will relieve the congested liver.

Gum-Bolls.—Gum-boils are sometimes limited to the substance of the gums, and sometimes connected with the decay of a tooth or socket. In the first variety it is a disease of only a few days' duration, and ceases almost as soon as the boil has burst or is opened; in the second, it may continue troublesome till the carious tooth is extracted, or the carious socket has exfoliated, or the whole of its texture is absorbed.

Gum-boils when connected with an unhealthy condition of the subjacent teeth, rarely disperse without passing into suppuration, and it is, therefore, better to encourage this process by the use of warm fomentations, or cataplasms, than to repel it. An early opening of the tumour is of importance, as, from the structure of the parts concerned, the walls of the abscess are usually tough and thick, and the confined matter seldom obtains a natural exit with sufficient freedom. A little mild opening medicine every other day will be found useful, and, after the abscess has burst or been opened, washing the mouth twice or thrice a day with an astringent lotion will tend materially to make the cure permanent. Twenty grains of sulphate of zinc, dissolved in half a pint of rose-water, will be a suitable lotion for this purpose.

Hay Fever.—This is due to irritation of the lining membrane of the nose and throat by the air-borne pollen from the flowering grasses. Spraying the throat with a lotion containing carbolic acid, 8 drops; sulphate of quinine, 2 grains; tannic acid, 4 grains; sulphurous acid, 3 drachms; and water to one ounce will be found of use; but the only certain cure is to live by the sea, or in town during the hay season.

Headache.—Take 10 grains of salicylate of sodium every hour, for 2 or 3 hours, or 7 grains of phenacetin every half-hour for an hour and a half. A drachm of potassium bromide at night will often relieve headache and sleeplessness. More "natural" cures are to lie down in a dark room and fast, or to

sip a glass of cold water slowly. An aperient is often all that is needed.

Heartburn.—Bismuth and soda powders as in dyspepsia (q.v.) may be given, also bismuth tablets.

Housemaid's Knee.—A swelling over the lower part of the knee-cap, brought on by frequent chills, bruising or friction. The swelling may be painless, with water in it, or it may be inflamed, and develop into an abscess. The latter is the easier to cure, as the opening of the abscess will cure the condition. The former may require a surgical operation to get rid of it. Painting with iodine is useful.

Ingrowing Toe-nail.—Generally the result of small boots. Cotton wool dusted with iodoform, and pressed between the nail and the soft parts will relieve the pain, but the best method is to cut a groove down the centre of the nail with a small file or a penknife, which practically divides the nail and removes the pressure. Larger boots should be worn.

Insomnia.—Persons actively engaged in literary pursuits, whose occupations absorb a large amount of nervous energy, are subject to conditions of insomnia. It is said that Paganini rarely slept, so entirely was his mind occupied night and day in his intense passion for music. Boerhaave is recorded not to have closed his eyes in sleep for a period of six weeks, in consequence of his brain being overwrought by intense thought on a profound subject of study. There is no symptom, when viewed in relation to the health of the brain and mind, that requires more careful and unremitting attention than that of insomnia, or wakefulness. It is one of the most constant concomitants of some types of incipient brain disease and, in many cases a certain forerunner of insanity. Insomnia should not be neglected or trifled with. If dealt with when the conditions first set in, a great deal of suffering and anxiety may be averted. Should the symptoms increase in severity the doctor should be consulted at once.

Inflammation, though a most serious condition, is a symptom of disease rather than a disease in itself, and its treatment must be sought in connexion with the organ or tissue affected.

Often it happens to be Nature's mode of cure, as in bleeding, in which by its means the end of the bleeding vessels become sealed; as in wounds, many of which, but for its instrumentality, would remain open and never heal; as in surgery, in which the surgeon sometimes has to promote inflammation in order to cause the broken ends of bones to unite. Disease names terminating in "itis" (Greek) denote inflammation of an organ or part, as gastritis (inflammation of the stomach), bronchitis (inflammation of the bronchial tubes), phlebitis (inflammation of the veins) and so on. Local symptoms of inflammation are heat, swelling, redness and pain, while the most conspicuous general symptom of inflammation is fever, manifested in every degree of activity. Inflammation may terminate naturally by resolution, or by suppuration (as of an abscess), or by ulceration (in which a part may be destroyed), or by gangrene (in which the destruction of a part takes place on a larger scale). For the different kinds of inflammation, see the diseases of which it is a prominent symptom.

Itch.—This is due to direct infection by a small parasite called *Acarus*. The irritation is most intense at night. Examination will show small elevated pimples, generally with the heads scratched off, all over the body, but especially in the angles between the fingers. The face is not attacked.

TREATMENT.—A warm bath at night followed by rubbing sulphur ointment all over the affected parts. The patient should sleep in the underclothing worn on the previous day. Another warm bath should be taken in the morning, and clean underclothing put on. The soiled underclothing should be disinfected. This treatment repeated for two or three nights will effect a cure.

Menstruation.—The period of puberty in the girl is marked by the appearance of a discharge of blood at the external organs of generation. This discharge comes from the interior of the womb, and recurs in health with great regularity every twenty-eight days, or once a month, for a period of thirty years. The amount of blood lost at each monthly period varies,

but usually it averages from three to four ounces. If the quantity becomes excessive, as it sometimes does, the health of the woman suffers. The flow is not, as a rule, established at once; sometimes several months elapse between the first and second menstrual period; but when a few months are over, it recurs with great regularity, sometimes coming on even to the hour. The time of life when menstruation begins varies, but may be said to occur in temperate climates between the fourteenth and sixteenth year. Climate exerts an influence in this matter, but there are other circumstances at work which tend to hasten the occurrence of puberty in the girl. Thus anything which tends to produce effeminacy—a lazy, listless life; undue mental excitement, caused by the reading of sensational novels, by conversation or the like; late hours, irregular habits of sleep; highly seasoned articles of diet and stimulants, have all a tendency to accelerate the occurrence of menstruation. The monthly periods when once established continue to recur at regular intervals in a woman who is healthy for about thirty years, during which time she is capable of conceiving. Menstruation ceases during pregnancy and generally during the period of suckling as well. Diseases which exhaust the strength and impair the vital energies of the body generally lead to a stoppage of the monthly discharge. This is frequently seen in the case of consumption and other diseases of a debilitating nature.

The appearance of menstruation is ushered in by certain well-marked symptoms, the significance of which should not be overlooked. About this time languor and general unfitness for exertion are complained of; there are dull, aching pains in the region of the pelvis; a feeling of dragging and weight about the small of the back is also complained of. There is a dark ring under the eyes. These pass away as the menstrual function becomes established. The change which menstruation works upon the girl is great. Her frame becomes rounder and fuller, the hips broaden, fat becomes deposited in various parts of the body, and the breasts enlarge.

About the first appearance of this discharge, the constitution undergoes a very considerable change, generally, indeed, for the better. The greatest care is then necessary, as the future health and happiness of the woman depend, in a great measure, upon her conduct at that period. She should be careful to take exercise daily in the open, to partake of a wholesome, nutritious diet and not to indulge in tight clothes. The exercise should be free and active, which will be found to promote digestion, to enliven the spirits and to ensure a proper discharge.

The final cessation of the menstrual discharge, like that of its beginning, is a critical period with all women. It seldom ceases all at once, but, for some time before its stoppage becomes somewhat irregular, both as to the periods and the quantity. The grand object of treatment at this period should be to avoid irritation or painful mental emotion. The diet should be nutritious, but plain, the exercise moderate, and costiveness should be carefully prevented by attention to diet and by lenient warm aperients.

Sometimes menstruation recurs every month, with little or no irregularity in this respect, but it is accompanied with great local pain, which is occasionally very severe especially about the loins, hips and region of the womb. One of the most efficacious plans of treatment is to administer an aperient pill every other night, so that the bowels may be kept regular, without being purged. At the same time, the patient ought to take much exercise daily in the open air, either on horseback or on foot; to be attentive to the rules of diet and to mingle with cheerful society. A warm bath at 96° F., every other morning will likewise be advisable and change of air and scene will much conduce to recovery.

Chlorosis is a complaint of young girls in which the monthly discharge is either absent altogether, or occurs irregularly and in small quantity; and suppression of the menses, which signifies an interruption to the discharge, may occur at any time of life after it has become habitual. It may, therefore, be remarked in women of any age up to forty-five or fifty. Of course

the chief symptom is the disappearance of the usual monthly discharge, with which various strange and unusual feelings are associated, differing in different individuals; such as a feverish heat and dryness of the skin, flushing of the face, headache, pains in the loins and back, costiveness, difficulty of breathing, palpitation of the heart and sometimes bleeding from the nose, stomach, or lungs. The most frequent causes of this suppression are great anxiety of mind; suddenly suppressed perspiration from cold, especially if occurring while the discharge was flowing; sudden alarm or terror; protracted fever; scanty and poor living. The principal methods of treatment are, to excite the action of the vessels of the womb and increase the tone of the system in general when weak or enfeebled, or to allay irritation in it when the complaint occurs in a woman of plethoric habit. When the suppression is associated with chlorosis the treatment should be directed to that disorder.

Nettle-rash, or Urticaria.—This consists of white wheals and red blotches, intensely irritating, coming and going, first in one and then in another part of the body. The cause is usually some article of food which has been ingested, and has disagreed. Shell-fish, pork, canned meats, and some fruits will bring on an attack.

TREATMENT.—An emetic, if the offending article of diet has recently been swallowed, followed by a dose of castor-oil. A light diet, and a few doses of fluid magnesia will complete the cure.

Neuralgia.—Give quinine and iron—2 grains of the former and 10 drops of the latter (as steel-drops) 3 times a day in water. Menthol may be applied externally, also ether spray. Decayed teeth or stumps should be removed, and ear discharge or defective sight attended to. If the attack comes on at the same hour every day, a dose of the quinine taken half an hour before the period may ward it off. Hot fomentations or camphorated oil containing some laudanum, will often relieve the pain during an attack.

Nightmare.—Give 20 grains of bromide of potassium in water at bedtime.

Nipples (Sore).—These should be

hardened beforehand with weak arnica lotion, or a little glycerine and eau-de-Cologne. When sore, apply green oil, prepared by boiling some elder leaves in olive-oil, and wear a nipple shield with a breast-tube teat. An excellent application is glycerine of borax. The nipples should be carefully washed and dried each time they are used, and the application put on afterwards.

Phthiriasis Capitis (Head Lice).—Lousiness of the head or scalp sometimes results in a very considerable eruption of raw, exuding surfaces, covered with crusts, which may mat the hair together. The seat of this is very commonly at the lower and back part of the scalp beneath the mass of hair there, especially in girls. Frequently it is impossible to find a single louse upon the head, so carefully have they been removed by careful combing and washing. But the nits, or eggs, are as surely indicative of the state as though the insects were themselves found; for they can and certainly will hatch out, and the scalp free from pediculi to-day, will have many there to-morrow.

Soak the hair with ordinary kerosene oil for twenty-four hours, fresh oil being added three times during that period: the head in the meantime is to be bound up, to keep in the volatile gases which thereby penetrate the nits. At the end of twenty-four hours the scalp is thoroughly washed with soap and water, and most of the eruptions will have disappeared, the lice will all be dead, also the nits.

Palpitation of the Heart.—This does not necessarily mean heart disease. It is more likely to be due to indigestion and flatulence. It may be relieved by taking a glass of hot water with half a teaspoonful of bicarbonate of soda, and a teaspoonful of sal-volatile in it. 5 or 6 drops of essence of peppermint on a lump of sugar are useful. External applications are hot fomentations and turpentine stupes.

"Pins and Needles."—This is a name applied to that peculiar numbness and pricking of the arm, foot, or leg, which is so commonly felt after pressure on the nerve-trunk, or a long-continued constrained attitude. It is caused by some interruption to the circulation and

is generally removed by rubbing or exercise. If it should continue, it may be the precursor of some more serious attack and medical advice should be sought.

The cause of this condition has been thus explained: "By pressure for a certain length of time the sensibility of the nerve is greatly blunted. When this pressure is removed suddenly, the sensibility will gradually be revived; as each nerve-fibre, composing the trunk, returns to its normal condition of sensibility, a pricking sensation is felt and the successive prickings from the successive awakenings of the numerous fibres cause the pins and needles."

Rheumatism of the Joints or Muscles.

—Rub camphorated oil or a similar stimulating embrocation, such as hartshorn and sweet oil, well into the affected parts with the bare hand for 15 to 20 minutes morning and evening. Flannel should be worn next to the skin.

St. Vitus' Dance or Chorea.—A nervous disease, characterized by involuntary twitching movements in all parts of the body. It is closely connected with rheumatism, frequently following on rheumatic fever, and associated with heart disease. It is common amongst the poorer classes, especially amongst those who do not get sufficient food and rest.

TREATMENT.—In many cases rest and good food will effect a cure. Cod-liver oil will help, but other medicines should be taken under medical advice. An attack usually lasts about two months, but it may go on for two years or more.

Sciatica.—Rub the limb well with chillie paste or belladonna liniment. Pure chloroform applied in the same manner will often give relief when other liniments fail. Give iodide of potassium in 3 grain doses, combined with 30 drops of compound tincture of cinchona 3 or 4 times a day. Salicylate of soda in 10 grain doses every 4 hours is very useful in severe cases. Injection of half a grain of cocain into the nerve will sometimes cure sciatica at once, but this kind of treatment should only be used under medical advice.

Snoring and Snuffles.—These result from impediment to breathing, either

through the nose (closed nose) or through the throat. If they are persistent, and not merely due to temporary catarrh, a doctor should be consulted, as very probably there is a spongy growth (adenoids) at the back of the throat, with or without enlargement of the tonsils. This may require removal to effect a cure. Any impediment to free respiration in children and young growing people is most detrimental to their growth and development.

Sore Throat.—The commonest form is that due to cold or catarrh. The throat and tonsils will be seen to be of a darker red than the surrounding parts.

TREATMENT.—A mild dose of laxative medicine, cold compresses, or hot fomentations to the throat externally, and internally painting the inflamed part with glycerine of borax or alum.

A second form is due to chill, or the intaking of impure gas or water. One or both tonsils will be seen to be inflamed and swollen, and either dotted or covered with white or yellow spots and patches. The glands under the jaw will be swollen and painful, and there will be a varying amount of fever present. In this case medical advice should be obtained, as the complaint may be either simple tonsillitis or diphtheria.

THE TREATMENT OF TONSILLITIS.—Give an active aperient, foment the throat constantly, paint the throat with a solution containing 1 part of lactic acid to 7 of water, and give a mixture containing 2 drachms of tincture of iron, 4 drachms of glycerine to 6 ozs. of water: 1 tablespoonful to be given every 4 hours. A gargle of a teaspoonful of carbolic acid to half a pint of hot water is useful. Rest in bed is necessary while there is fever.

Spasms.—Spasms in the ordinary sense of the word mean gripes, and commonly depend on indigestion and constipation.

TREATMENT.—In many cases relief may be obtained by the administration of a purgative. If the pain is very severe, it may be relieved by adding 15 drops of laudanum to the purgative. Half an oz. of castor-oil with 10-15 drops of laudanum is a favourite

prescription suitable for an adult. As soon as the pain is relieved the general condition of health must be attended to, and anything in the diet that has been known to give rise to pain should be scrupulously avoided, and only simple plain foods taken.

Specks before the Eyes.—These are generally indicative of a sluggish liver, and may be readily removed by taking the old-fashioned blue pill at night, followed by a black draught or Seidlitz powder in the morning.

Squint.—This is an acquired disfigurement. At first it is only occasional, and should be treated before it becomes permanent. It is due to abnormality in the vision—generally to strain, caused by long sightedness. The eyes should be tested and suitable spectacles worn; this will nearly always effect a cure. If the squint is permanent, an operation may be required to correct it.

Stiffness.—**TREATMENT.**—Hot baths and massage.

Stitch, or Pain in the Side.—When this is symptomatic of disorder in the lungs or digestive organs, it is to be removed by the means usually employed to restore these viscera to a healthy state. But sometimes it is not clearly connected with any primary affection of those parts, or, if so connected, is found to be so troublesome a symptom as to call for particular attention. When it is not the result of disorder in the lungs or stomach, it is usually occasioned by chronic inflammation of the pleura—that is, the membrane lining the cavity of the chest; by habitually forcing the chest in writing against the hard edge of a desk, or by the use of tight stays. If the patient has reason to consider it to be owing to either of the last two causes, he may regard it as depending on the inflamed state of the pleura, especially if the pain is increased on pressure and on taking a deep inspiration. Should close application to writing, or the use of tight stays, have given rise to this pain, these practices must be abandoned at once. Without this no great or permanent benefit can be gained, but with such reasonable co-operation the means prescribed by the doctor will seldom fail to remove the

complaint. When pain in the side is associated with a deranged state of the stomach and general health and there is a good deal of general languor and debility, a pill composed of a grain of calomel with the same quantity of James's powder and opium every night, will be found useful, some mild tonic medicine being taken during the day.

Superfluous Hairs.—These can only be permanently removed by the process of electrolysis. This must be applied by a skilled expert.

Tic Douloureux.—Facial neuralgia, or tic, is, perhaps, the most common form of neuralgia and, as the nerve attached is made up of three branches, any one of these may be affected.

One of these branches goes to the eye and a part of it passes out from the orbit and turns up over the forehead. This is often the seat of pain and, when this is so, the neuralgia generally affects one side of the forehead, extending upwards towards the hair. The next branch of this nerve comes below the eye and extends over the cheek and on to the side of the nose. This, too, may be and very often is affected, especially when the teeth on the corresponding side are decayed. The third branch of the nerve extends along the lower jaw and is not so often the seat of pure neuralgic pain as the others. The branch on the forehead may be affected without any definite cause being ascertainable. But in the other branches a cause is much more likely to be found in some decayed teeth, or some condition of the jaw which gives rise to irritation, and though such maladies are included under the term neuralgia, they are rather instances of pain produced in one spot appreciated by the sensory centres in another.

For general treatment, etc., *see* NEURALGIA.

Tired Eyes.—Aching of the eyes shows overstrain of the ocular muscles, and is frequently accompanied by the most persistent and intractable form of headache. Some slight defect in the vision will be discovered, correction of which by suitable glasses will relieve the symptoms.

Toothache.—Poppyhead fomentations should be applied to the face,

externally. A small pledget of cotton wool, soaked in oil of cloves, placed in the cavity of an aching tooth will give speedy relief.

Varicose Veins.—These are prominent, thickened and tortuous veins in the leg and thigh. The inner part of the leg, just above the ankle, is often blue and congested, and here ulceration of a very obstinate and painful kind may form, due to deficient circulation through the veins. A vein may get so distended that it may burst through the skin, in which case dangerous bleeding may result. (See "What to do in Case of Accidents.")

TREATMENT.—To prevent the veins getting worse, and to relieve the aching, elastic stockings or bandages should be worn. In bad cases the veins must be removed by operation.

Vomiting.—Vomiting means the ejection of the contents of the stomach upwards instead of into the bowel. The act is a complex one and seems due to two factors, namely, contraction of the walls of the stomach itself and contraction of the abdominal walls, the contents of the abdomen thereby in their turn pressing on the stomach itself. The causes of vomiting are very various. Irritation of the stomach itself, whatever be its cause, will give rise to ejection of its contents; but vomiting occurs in many other maladies. When gallstones or small urinary calculi are passing there is usually sickness and vomiting; in Bright's disease there is vomiting, too, and in the maladies of the brain among children vomiting is an invariable symptom. Vomiting is a very distressing affection, and, when it proves obstinate or severe, calls for the immediate assistance of art in order to its being relieved. To arrest vomiting, ice is a capital remedy. Bismuth also is good. In all cases the quantity of the remedy used should be small. Bulky preparations will most probably be rejected.

Warts.—Apply concentrated acetic acid daily, when they will soon wither away. Collodion corn paint will also often cure them. A sulphur lozenge taken 3 times a day is also useful.

Wens.—Wens on the scalp and face are greatly distended sebaceous glands,

forming little sacs containing more or less cheesy matter. Sometimes these have an opening from which this may be squeezed. The treatment otherwise is by excision.

White Leg is a form of inflammation of the large vein of the leg, sometimes occurring in nursing women. The left leg is more commonly affected. It is greatly swollen, of a dull white colour, the skin stretched and shiny, and feels heavy, stiff and responds painfully to movement. Hot fomentations and rest for a lengthened period are the main treatment. Friction with vaseline tends to reduce the swelling and pain and, when the patient is strong enough to get about, she should wear a firm, well-applied bandage.

Whitlow.—Whitlow is an inflammation at the top of the finger, usually involving the nail. (It may be due to a poisoned finger or to an unhealthy, poor state of the blood.) It is characterized by throbbing pain in the finger, often extending up the arm. The finger end is swollen, red, shiny and very tender to the touch. If it progresses, matter is formed, and no relief is obtained till the matter is evacuated either by a small incision or by waiting till the abscess bursts, a much more tedious proceeding.

TREATMENT.—Bathe the finger in a bath of hot antiseptic for half an hour 2 to 3 times daily. (Carbolic acid, 1 teaspoonful to the pint of water. Sanitas, 1 teaspoonful to the pint of water.) A hot antiseptic fomentation should be kept on the finger, and the hand supported in a sling. After the pus has been let out the same treatment is pursued till all matter ceases to come away, when the finger may be dressed dry and allowed to heal up.

Worms: Round Worms.—The round worm, in shape, size and general appearance, is very much like the common earth-worm, but the latter is redder and not so pointed at its two extremities; the earth-worm also has little projections on its under surface, which probably aid it in locomotion, while they are absent in the parasite. It is found in the small intestines, or that portion of the alimentary canal which is next to the stomach; they may occur singly or several together,

and are either vomited up or passed by the bowel; they are more common in children than in adults. A purgative of a dose of rhubarb or aloes will generally suffice to get rid of the worm. When the worm is present, the patient has generally colicky pains in the

stomach, foetid breath, with nausea, or vomiting, and bad appetite. Santonin is, perhaps, the medicine most certain to expel this worm; it may be combined with a purgative; it forms the chief ingredient in the so-called "worm-powders."

WHAT TO DO IN CASE OF ACCIDENT OR SUDDEN ILLNESS.

Apoplexy.—When a person is in an apoplectic fit prevent all unnecessary movement; raise the head and remove everything tight from the neck, then apply ice or cold water cloths to the head, and put the feet in hot mustard and water. The bowels should be freely opened by the administration of calomel.

Burns and Scalds.—When any part has been scalded, immediately immerse it in cold water or pour cold water over it; or dust bicarbonate of soda over it, and then apply a wet cloth. When blisters have formed, prick them with a needle or a pair of scissors, and press the skin carefully down, after which apply the bicarbonate of soda as before, or carron oil (equal parts of olive-oil and lime-water); thymol or carbolic oil (1 part to 100 of olive-oil) answers well. The oil should be applied on clean linen rags or cotton wool, and the dressings should not be made more often than is required by cleanliness. The injured portion should be exposed as little as possible in the changes. In cases of clothes catching fire, the patient should be immediately laid down and rolled in a thick coat, rug, blanket, tablecloth, etc., to extinguish the flames.

Bruises.—These are caused by blows, falls, etc., the skin remaining unbroken.

TREATMENT.—Apply either tincture of arnica, spirit and water, vinegar or sal-ammoniac and water. The following is a useful combination: chloride of ammonium (sal-ammoniac) 1 oz.; rectified spirit, lavender water, or eau-de-Cologne, 2 ozs.; vinegar, 3 ozs.; water to make 16 ozs. in all. Rags dipped in this solution should be laid over the bruise and kept constantly wet. Hot fomentations are frequently more effectual than cold applications in removing the associated discoloration.

Childbirth.—As it sometimes happens, especially in the case of those who reside in the country, and at some distance from medical assistance, that the child is born before the doctor has had time to be sent for, it will be well for those who are in attendance to know how to act in the meanwhile. It is desirable, therefore, to lay down a few plain rules for the guidance of those who may at any time be thus awkwardly situated. As the head is being born, one of the attendants should place her left hand upon the patient's belly and grasp the womb. The object of this is that she may be able to follow it as it contracts and expels the child, and when the infant is born that she may keep hold of it until the arrival of the doctor, or, at any rate, till the after-birth has come away. Unless this simple precaution is attended to, the patient may suffer from flooding, and her life be endangered. When the head is born, one of the attendants should place her hand upon the child's neck and feel if there be any coil of cord round it; and if there be it ought to be loosened or it may be removed from the neck altogether. It is very important that this should be attended to without delay, as the child may be easily strangled if the cord is wound tightly round the neck. Having ascertained that everything is right, that there is no coil of cord about the neck of the child, the right hand of the attendant should be placed under the infant's head to direct it forwards as the body is born, which will generally be in a few seconds afterwards. On the child being born, if strong and healthy, it will generally begin to cry. If however, instead of crying it remain in an apparently lifeless condition, efforts must be made as speedily as possible to cause it to breathe. For this purpose the child should be smartly tapped upon

the buttocks, back, or chest, which will, in many instances, have the desired effect of bringing it round. Should this procedure, however, not have the desired effect, what is called artificial respiration must be had recourse to. Artificial respiration may be performed as follows:—The hands of the infant are seized by the attendant and raised from the side until they are lifted above the child's head as far as they will go, by doing which the act of inspiration or drawing of air into the chest is imitated, after which the hands and arms are to be depressed until they are brought to the side again, by which the air will be driven from the chest, and the act of expiration be thus imitated. Suppose, however, that the child has been born, and that as soon as it comes into the world it begins to struggle and kick violently, what is to be done? If the medical attendant is likely to arrive presently, the infant's head should be turned towards the end of the bed, so as to be away from the discharges, and the bed-clothes so arranged as to admit of a plentiful supply of air. Beyond this nothing need be done in such cases. If, however, it is uncertain when the doctor may arrive, or if it be in the country, where the presence of skilled assistance cannot always be depended on just when wanted, it will generally be necessary to divide the cord, and thus sever the child from its connexion with the parent. This may be done in the following manner:—The cord being taken up in the left hand, a piece of tape, several strands of whitey-brown thread, or two or three thicknesses of yarn, are passed round it and tied in a double knot about the distance of three fingers' breadths from the baby's navel. A second ligature should then be placed about an inch and a half nearer to the mother, and midway between these two ligatures the cord is to be divided. The application of this second ligature is not absolutely necessary in the great majority of cases, but it is always better to apply it. This having been done, the child is to be placed in the flannel receiver and removed to a secure place. This should not be an armchair, or other place of a like nature, where the

child runs a risk of being injured through the carelessness or forgetfulness of those in the room. Further attention must now be directed to the mother. The first question which naturally suggests itself on turning again to her is, "What of the after-birth? Is it to be removed, or should it be allowed to remain?" The answer to this is, that "the less the attendants interfere with the after-birth the better." Any rash attempts at removing it by pulling upon the cord may be followed by severe flooding, or by breaking of the cord, the after-birth remaining in the womb. Frequently, indeed, the after-birth comes away a short time after the child is born, the same pain that brings about the expulsion of the latter, giving rise to the loosening of the former, so that on the recurrence of the pains after a short period of rest it is frequently expelled. Sometimes, also, the same pain which caused the birth of the child expels the after-birth, which follows upon the infant's heels. Should it not come away by the normal contractions of the womb, no attempt is to be made to remove it. The hand of the attendant, which has been grasping the womb, must not be relaxed, but should be kept there incessantly until the arrival of the medical man. This pressure by the hand over the lower part of the belly upon the womb is a great safeguard against the occurrence of flooding, and frequently will be found of assistance in causing the expulsion of the after-birth. Care must be taken, in removing the child from the bed, that in lifting it a sufficient hold is obtained. It sometimes happens that by the careless manner in which children are lifted they fall, and are seriously bruised and injured. The way in which a child can be best lifted is by taking the back of his neck between the thumb and forefinger of the right hand, and allowing the buttocks to rest upon the palm of the left. In this manner the child may be lifted with perfect security and placed in the receiver.

Choking.—If the substance causing choking be at the upper part of the throat, thrust the finger and thumb into the mouth, and endeavour to seize

it. If this cannot be done, take a pen-holder, a quill, or piece of whalebone—anything, in fact, that will do, and endeavour to push it down the gullet. A smart blow on the back will sometimes dislodge a foreign body from the throat. If the obstruction be only slight, swallowing a small piece of dry bread will often effect the removal. If it seem serious, medical aid should be sought instantly. Children may be held upside down, and smartly slapped on the back.

Concussion of the Brain.—Move the patient as little as possible, and keep him absolutely quiet in a darkened room. He should be placed between hot blankets and hot bottles, or a hot brick wrapped in flannel applied to the feet and body. Alcohol should not be administered unless ordered by the doctor.

Croup.—Take the child out of bed and put it into a bath of 100° F., and keep it there for half an hour; or wrap it in a sheet wrung out of warm water, with dry blankets on top, and keep it in this for 1 hour. Give 1 teaspoonful of ipecacuanha wine every quarter of an hour in tepid water, and give drinks of tepid water between, until vomiting takes place. Keep the atmosphere moist by the steam from a bronchitis or other kettle, which should be kept boiling in the room. Medical aid should be sought at once.

Dislocations.—If medical assistance is at hand do not touch a dislocation; merely support the limb in the position of greatest comfort, until the arrival of the doctor. If skilled assistance cannot be had, get some one to steady the body or the part of the limb nearest the body, and use gentle, steady extension upon that furthest removed until the parts are again in apposition. Then apply cooling lotions (such as Goulard's lotion with a little spirits of wine in it) to the injured joint, and keep the limb in proper position by means of slings and bandages.

Drowning.—Loosen the clothing about the neck and chest, the braces or stays. Place the patient on the floor or ground, if possible on a slope with the head lower than the heels, in order to allow the water to run out of the air-passages, with the face

downward and one of the arms under the forehead. If there be only slight breathing, or no breathing, or if the breathing presently fail, then turn the patient instantly on the side, supporting the head, and excite the nostrils with snuff, hartshorn and smelling salts, or tickle the throat with a feather. Rub the chest and face till warm, and dash cold water or cold and hot water alternately on them. If there be no success, imitate the motions of natural breathing. To do this place the patient on his back, supporting the head and shoulders on a small firm cushion or folded article of dress; draw the tongue forward, and slip an elastic band over it and under the chin, or tie a piece of string or tape in the same way; then, kneeling behind the patient's head, grasp the fore-arms just below the elbows, and draw them gently and steadily upwards above the head, and keep them stretched upwards for 2 seconds; then turn them down and force them gently and firmly for 2 seconds against the sides of the chest. Repeat these measures about 15 times in a minute. When breathing is restored, rub the limbs upwards with firm grasping pressure and energy, to drive the blood along the veins to the heart, using handkerchiefs, flannels, etc. Apply hot flannels, hot bottles, bladders of hot water, or heated bricks to the pit of the stomach, the armpits, between the thighs and to the soles of the feet, or, if these are not available, cover the limbs when dried and rubbed warm, with coats, waistcoats, or any articles of clothing to hand. On the restoration of vitality a teaspoonful of warm water should be given, and then small quantities of warm coffee.

Epilepsy.—At the onset of a fit the patient should be caught in the arms of a bystander and laid gently down upon his back, with something placed under his head for a pillow, and everything tight should be removed from his neck. Insert a cork between the teeth to prevent the tongue being bitten, then wait patiently till the fit is over.

Eye, Dust in the.—The most common form of injury to the eye is from particles of dust and small foreign bodies. As the course of the tears is from the

gland at the upper and outer part of the ball towards the canal at its inner side, and as the lids are firmly attached to bone at their inner extremities and only loosely to bone at their outer, such particles are usually washed by the flow of tears and moved along by the action of the lids towards the space at the inner angle of the eye, which is called the tear lake. From this we remove them, almost unconsciously, with the end of the finger, or perhaps the handkerchief. Occasionally a cinder or piece of coal, or some other object with projecting points, becomes lodged on the conjunctiva and, as everybody knows from experience, is the cause of most acute pain. A smooth object rarely gives much pain and is almost invariably passed on by the tears and the action of the lids. The process may be assisted by gentle rubbing of the lids, which, however, only makes matters worse when the offending mote has once taken hold. It may be well to suggest that it is a very simple and easy thing to evert the eyelid, and that many hours of really serious suffering may often be saved by it, particularly in travelling. To do this, direct the sufferer to look well downwards, then, taking the lashes of the upper lid between the finger and thumb, stretch the lid downwards and outwards, place the point of a pencil on the upper part of the lid, above the top of the ball and press it downwards while the edge of the lid is raised. The inner surface of the lid is thus exposed and the cinder or other object can be readily removed by touching it with a fold of a handkerchief. When the mote is just within the margin of the lid, it may sometimes be removed by drawing the upper lid well down and pressing it against the skin of the lower lid.

Fainting.—In this affection there is pallor of the face, coldness, perspiration; feeble, shallow and irregular breathing; noises in the ears; indistinctness of vision and giddiness.

TREATMENT.—A fainting fit can frequently be prevented if the patient is told to sit in a chair, and his head is then gently pressed down on a level with his knees. Another method is to lay the patient upon the back, remove

all constricting articles of clothing from about the neck, and apply strong smelling salts to the nostrils; sprinkle cold water over the face, and give a dose of half a teaspoonful of spirit of sal-volatile in a little water.

Foreign Bodies.—**IN THE EAR.**—When a child gets a foreign body of any kind into the ear, the wisest thing is to take him at once to the doctor, as much harm may be done by probing the ear with hairpins or pliers by those not well acquainted with its anatomy. Where a doctor is not available the best thing to do is to syringe the ear with warm water, unless the foreign substance is a pea or bean, which would at once commence to swell as the result of moisture, and would consequently cause great pain and become more difficult to remove. Should an insect get into the ear, the head should be held over to the other side and the ear filled with warm oil, after which the ear may be syringed with a little warm water.

IN THE NOSE.—Children sometimes push stones or shells or other substances up their nostrils. An attempt may be made to remove this by telling the child to keep his mouth closed and to blow hard down the blocked nostril, the free nostril being closed meanwhile by the pressure of the finger. Should the substance not be easily removed in this way no time should be lost in taking the child to a doctor.

IN THE EYE.—If the offending substance is not imbedded in the globe of the eye it can generally be easily removed, either with or without everting the lid (turning the lid outwards), by using the corner of a soft pocket-handkerchief, or a camel-hair pencil moistened with water or olive-oil, or by drawing the top lid down over the lower. Blowing the nose sharply will often effect removal. If the substance is imbedded in the globe of the eye, a camel's hair pencil dipped in water or oil may be passed over it, and an effort made to dislodge it. Should this fail, and medical assistance is not at hand, a blunt-pointed instrument may be carefully passed across the surface. The eye must not be rubbed, or permanent injury may be done. Should quick-lime get into the eye, wash it out

as thoroughly as possible with water, then bathe with a lotion consisting of a teaspoonful of vinegar to a wineglassful of water, or drop a little castor-oil into the eye. In case of injury by acid, bathe with milk or 1 part of lime-water to 3 of water.

IN THE AIR-PASSAGE.—Morsels of food more frequently than other substances get into the larynx or trachea, the accident happening when a person is engaged in laughing or talking when the mouth is full of food. The symptoms are sudden spasmodic cough, protrusion of the eyes from the sockets, blood or froth issuing from the mouth and nose, while the patient gasps for breath, turns black in the face and perhaps becomes insensible. If the morsel of food be light and of small size, it is sometimes expelled during a fit of coughing. Many bodies may find their way into the larynx and trachea—coins, cherry-stones, beans, or in fact anything which may happen to be in the mouth—and their presence sets up precisely similar symptoms. When such an accident happens, a spectator should at once put his forefinger down the throat and try to seize the foreign body. If this is not successful, inversion of the body, combined with a shaking or jogging motion, or a smart slap between the shoulders, will sometimes cause the offending article to fall from the larynx. Should respiration be still suspended, the doctor must be fetched instantly and, in the meanwhile, cold water should be flung on the chest to arouse breathing, and artificial respiration must be resorted to. The operation of laryngotomy or tracheotomy may be needed in obstinate cases.

Fractures.—When a fracture has taken place the object is to bring the ends of the bone that has been broken as nearly as possible to the position they were in previous to the accident. In order to do this, the part nearest the body must be steadied by some one, while that furthest removed is gently stretched out, the sound limb being uncovered and observed as guide. Having got the limb into good position, splints must be applied to fix it in the position in which it has been placed, and the limb must then be kept still.

In dealing with fractures immediately after they have happened, great care must be taken in moving the patients in order to prevent a simple fracture being converted into a compound one: that is, to prevent the fractured bone protruding through the skin. For this reason it is always best, in giving first aid, to apply temporary splints outside the clothes till the sufferer can be placed in more favourable conditions for treatment.

Hæmorrhage, or Bleeding.—FROM A WOUND.—The blood from an artery is distinguished from that of a vein by being brighter in colour and by flowing in a saltatory or jumping way.

If from a vein make a compress by folding up a piece of lint or a small handkerchief, and apply it to the wound with a bandage over it. This treatment also generally answers in bleeding from small arteries, although the pressure requires to be greater. If this is insufficient, and the sufferer is losing a great deal of blood, pending the arrival of medical aid a rough and ready tourniquet should be applied also, by winding a handkerchief or silk scarf around the limb, on the side of the wound nearest the heart if an artery has been cut, or below it if a vein, and twisting tightly by means of a stick slipped beneath one of the turns. A hard pad over the artery or vein, under the handkerchief, will greatly assist the local pressure.

FROM VARICOSE VEINS.—Place the patient on his back, and apply a compress and bandage, or put half-a-crown or a penny in a handkerchief, place it over the wound, and tie it down tightly. The limb should be raised as much as possible.

FROM THE NOSE.—Apply cold water clothes or ice to the forehead; raise the arms above the head; seize the nose between the fingers, and squeeze the sides together. Make the patient sit upright in a chair; do not let him stand with his head over a basin, as this is a common cause of the bleeding continuing. In severe cases it may be necessary to plug one or both nostrils, but medical assistance is then necessary. One or other of these methods may be tried, or they may all be tried in turn if the bleeding is difficult to check.

FROM LEECH-BITES.—Lay a crystal of iron alum upon the wound. Dried alum and tannic acid may be used in a similar manner. Two strong needles run through the skin cross-wise, passing beneath the wound, and a piece of linen thread tied round them, will frequently answer when the simpler means fail.

AFTER TOOTH EXTRACTION.—Sponge the gums dry and see exactly whence the bleeding comes then plug the toothsocket with wool moistened with perchloride of iron solution. A still better way is to paint the bleeding point with a solution of adrenalin, 1 in 1,000. Sometimes a saturated solution of antipyrin acts as an efficient styptic.

AFTER CONFINEMENT.—Keep the patient at absolute rest on her back, and remove the pillows so as to keep her head low; cover only very lightly with bedclothes. Place the hands on the lower part of the abdomen, and press deeply down with a kind of kneading motion. If the womb is felt contracting into a hard lump under the hands, grasp it and keep it tight till the arrival of the doctor. Give the patient a little tepid milk and water to drink.

FROM THE UMBILICAL CORD.—When bleeding takes place from the umbilical cord, the child generally becomes restless, and the blood may saturate its clothing. Undress the child immediately, and tie a ligature of three or four thicknesses of worsted or linen thread behind the original ligature.

INTERNAL BLEEDING.—Instances of this form of bleeding are seen in hæmorrhage from the lungs and stomach. That from the lungs is generally bright scarlet in colour and frothy in appearance, owing to the admixture of air; that from the stomach is dark in colour and is not frothy. Keep the apartment cool, and the patient quiet and in the recumbent posture. Ice may be sucked, or a little cold water taken when ice cannot be had. 5 to 10 grains of gallic acid with 5 to 10 drops of tincture of opium, and 10 or 15 drops of aromatic sulphuric acid, may be given in a little water every 3 or 4 hours.

Hysterics.—Hysterics consist in a

convulsive struggling, alternately remitting and increasing, with a sense of a suffocating ball in the throat, drowsiness, copious discharge of pale urine, rumbling in the bowels and fickleness of temper.

Hysterical affections occur much more frequently in the unmarried than in the married, and most commonly between the age of puberty and that of thirty-five years; and they make their attack oftener about the period of menstruation than at any other time. Women of a delicate habit and those whose nervous system is extremely sensible are most subject to hysterics; and the habit which predisposes to their attack is caused by inactivity, and a sedentary life, grief, anxiety of mind, late hours, dissipation, a suppression or obstruction of the menstrual flow, excessive evacuations and the constant use of an innutritious diet. They are readily excited in those who are subject to them by passions of the mind and by every considerable emotion; and are especially the effect of surprise: hence sudden joy, grief, or fear is very apt to occasion them. They have also been known to arise from irritation and sympathy. Constipation and severe disorder of the bowels will sometimes give rise to very painful hysteric fits. The exciting causes of hysteric fits are chiefly the various affections of the mind, as fear, terror, pleasing excitement, sudden joy, anxiety, or distress. And the proper preventive treatment, consequently, is the regulation of the mind and avoidance of the above mental affections in their excess.

SYMPTOMS.—The hysteric fit often takes place without any previous warning, though generally there are some preliminary signs, as yawning, stretching, dejection of spirits, anxiety of mind, sickness at the stomach, palpitation of the heart and sudden bursts of tears, without any assignable cause. The paroxysm soon succeeds, with a coldness and shivering over the whole body and frequently an acute pain on the left side and a sense of distension, giving the idea of a ball or globe rolling about in the abdomen and gradually advancing upwards till it gets into the stomach; thence removing to the

throat, it occasions the sensation of an extraneous body lodged there, which is called *globus hystericus*. The disease having arrived at its height, the patient appears threatened with suffocation, she becomes faint and is affected with stupor and insensibility; whilst, at the same time, the trunk of the body is twisted backwards and forwards, the limbs are variously agitated and the fists are closed so firmly that it is difficult, if not impossible, to open the fingers; wild and irregular actions follow, in alternate fits of laughing, crying and screaming, incoherent expressions are uttered and sometimes a most obstinate and distressing fit of hiccough takes place. The spasms at length abating, a quantity of wind is belched, with frequent sighing and sobbing; and the patient, after appearing for some time quite spent, recovers the exercise of sense and motion, without any other feeling than a general soreness and a pain in the head. It is rarely that a hysteric fit becomes dangerous; though it has, in a few instances, terminated in epilepsy or insanity.

TREATMENT.—Put the hysterical person on the bed and loosen all the clothing. Be decided but not hard in your manner. The hysterical fit will pass off without injury to the patient. A sensible writer recommends cold bathing, open-air exercise, strengthening diet, cheerful surroundings, with the removal of all care and perplexities. Attention to regularity of the bowels and frequent change of air and scene are positively demanded. All irksome family requirements should be suspended. Iron pills may be taken, two at a dose, night and morning; and a bitter tonic (quassia, gentian, etc.), in half-wineglass doses, two hours before dinner and supper. At the proper season, sea-bathing will prove beneficial. What is known as the Weir-Mitchell treatment of hysteria has undoubtedly produced remarkable results in cases which have been intractable to ordinary treatment. The success is most striking in those advanced cases which have become chronic and bed-ridden. The principal features of this treatment consists in the separation of the patient

from sympathetic friends and relatives; the confining of the patient to bed, not allowing her at first to read, write, or even feed herself; and the daily use of massage. The diet for the first week or two consists almost entirely of milk, a teacupful being given every two hours. After a little while solid food is added to the dietary; a chop for example being given at noon, and toast and bread and butter being given with the milk.

Intoxication.—When loss of consciousness has occurred from this cause, give an emetic of mustard and water (1 table spoonful in tepid water), or 20 grains of sulphate of zinc or powdered ipecacuanha. The emetic should be followed by 2 or 3 draughts of warm water. Remove to a warm atmosphere, and give strong tea or coffee after the emetic has taken effect.

Poisons.—Many of these give rise to vomiting, and are thus got rid of. In such cases the vomiting should be encouraged by tickling the back of the throat with a finger or feather or by giving draughts of tepid water. If it is at hand, a stomach-syphon, which is much more convenient to use than the stomach-pump, should be employed to withdraw the poison. Care must be taken to pass the tube along the *back* of the throat, as otherwise harm may result. If the poison has not given rise to vomiting, a handful of salt in lukewarm water may be given and draughts of tepid water afterwards. Mustard and water is a good emetic when the poison taken is not irritant in character. Twenty grains of powdered ipecacuanha in water, or the same quantity of sulphate of zinc in water, may be used in the same way.

GENERAL DIRECTIONS—When an alkali (see below) is the poison, give drinks of weak vinegar or lemonade. When an acid, chalk and water, whiting plaster from the walls, or white of egg; if a narcotic, give strong coffee, and do everything to *keep the patient awake*, walking him about, opening the windows wide, applying cold water to his face, and so on.

ACONITE, MONKSHOOD, OR BLUE ROCKET.—Give 1 table spoonful of mustard in water or 20 grains of

sulphate of zinc in water; then a dose of castor-oil. Hot bottles should be applied to the feet, and a tablespoonful of spirit of sal-volatile in water, or a cup of strong coffee given.

ALKALIES, such as potash, soda, ammonia, taken as pearl ashes, soaps, common washing soda, and ammonia in vapour, solution and solid form.

Give drinks containing vinegar; or lemonade, lemon-juice or olive-oil may be given, and stimulants in case of collapse.

ARSENIC.—Empty the stomach with an emetic and the stomach-syphon, and then give freshly prepared ferric oxyhydrate, prepared by adding a solution of carbonate of soda to a solution of ferric chloride. The patient must afterwards be fed for a considerable time on a milk and farinaceous diet only.

BARYTES.—Give 2 teaspoonful of Epsom or Glauber's salts every 2 hours until the bowels act.

BELLADONNA.—Give an emetic of 20 grains of sulphate of zinc in water, or 1 tablespoonful of mustard in warm water; then drinks of tepid water, or stewed tea, the tannin in which renders the poison innocuous. Afterwards give strong coffee.

CARBOLIC ACID.—Use the stomach-syphon if at hand. Empty the stomach with it, and then wash out that organ with a dilute solution of Epsom salts. White of egg and milk may be given. External warmth, and brandy by the rectum, are useful to combat the depression.

COPPER.—Use the stomach-syphon or give an emetic followed by draughts of hot water, barley and water, or arrowroot and water, to soothe the inflamed coats of the stomach.

MERCURY, CORROSIVE SUBLIMATE.—If the patient has not vomited give an emetic, followed by white of egg and demulcent drinks (lime-water, barley-water, etc.).

FOXGLOVE.—Give an emetic of mustard and water or 20 grains of sulphate of zinc in water, then give a dose of castor-oil and a cup of strong tea.

FUNGI (TOADSTOOLS, ETC.).—Give an emetic of mustard and water, afterwards a dose of castor-oil.

HEMLOCK.—The same as for Foxglove.

HENBANE, THORN APPLE, AND TOBACCO.—The same as for Belladonna.

HYDROCHLORIC ACID.—The same as for sulphuric acid poisoning.

LABURNUM.—Give an emetic of mustard and water or 20 grains of zinc sulphate in water, followed by draughts of warm water. If there is much collapse, strong coffee or other stimulants should be administered.

LAUDANUM, OPIUM, AND MORPHIA.—Give 20 grains of sulphate of zinc or 1 tablespoonful of mustard in water, then drinks of tepid water. Wash the stomach out with a weak solution of Condyl's Fluid if a stomach-syphon is available. Afterwards give strong coffee, and keep the patient constantly in motion in the open air till drowsy feeling wears off.

LEAD.—Give an emetic in the first place, then 2 teaspoonfuls of Epsom or Glauber's salts every 2 hours until the bowels act. When this has been accomplished continue the salts in smaller doses. Opium may be needed if the abdominal pain is severe.

NITRIC ACID OR AQUAFORTIS.—The same as for poisoning by sulphuric acid.

OXALIC ACID OR ACID OF SUGAR.—Give magnesia or chalk mixed with water. When the acid is neutralized by these means give 1 tablespoonful of castor-oil.

PHOSPHORUS.—Use the stomach-syphon to evacuate the contents of the stomach. If this is not available, give an emetic of 20 grains of zinc sulphate or 3 grains of copper sulphate dissolved in water. Purgatives should afterwards be given, but castor-oil must *not* be used since phosphorus is soluble in oil and the poison is then more easily absorbed.

PRUSSIC ACID.—Evacuate the stomach with the syphon or give emetics of mustard and water, or 20 grains of zinc sulphate in water. Then commence artificial respiration, as described under "Drowning."

PTOMAINE POISONING.—Ptomaine poisoning may result from the eating of meat or fish in a state of decomposition. It commonly occurs after the eating of sausages, pork pies, or tinned meat. The principal symptoms are

violent colicky pains, vomiting and diarrhoea, headache, great muscular prostration, and often a rise of temperature. These symptoms are usually followed by collapse. Emetics should be at once taken, followed by purgatives. One or two tablespoonfuls of brandy may be necessary in the case of threatening collapse.

SHELL FISH.—Give an emetic, then a purgative, afterwards 20 or 30 drops of spirit of sulphuric ether on a lump of sugar.

SULPHURIC ACID OR OIL OF VITRIOL.—Give chalk, magnesia or soda, mixed with water. Failing these, white of egg or soap and water may be used to neutralize the acid. Treat the collapse with hot bottles and blankets, and an enema containing 1 oz. of brandy and an egg beaten up.

Shock.—After a severe—or sometimes even after a slight—accident, and after a fright, some people suffer from collapse or shock. They will be faint, depressed, and cold; the pulse will be weak and difficult to count and the breathing shallow, the face pale and pinched and the expression alarmed. Sometimes this condition of shock is so severe that it ends in death, even when the accident itself has been but slight. The degree of shock depends very much upon the temperament of the sufferers, being much greater in those of a weak and timid disposition.

TREATMENT.—Recumbent position, application of warmth to body and limbs, friction and massage of limbs, rubbing towards the heart. Give hot drinks, tea or coffee, and if the nature of the accident will permit, a little weak stimulant, also hot. Loosen all tight clothing, and finally if the patient is conscious, cheer him up as much as possible.

Sprains.—Foment the part well with warm water, then brush tincture of arnica over it with a camel-hair brush several times a day. In place of the fomentations, cold water bandage or lint well moistened with lead lotion or an evaporating lotion containing methylated spirit, often give relief. When the more acute symptoms have passed, wrap the part in cotton wool, and apply a good firm

bandage (india-rubber if it can be had) to diminish the swelling and give a feeling of security when the patient is able to move about. Later on, if the part is still not quite right, use the cold douche, and friction it with a rough towel.

Suffocation.—If the person is found hanging, he should be at once cut down and artificial respiration employed, as in drowning. If the suffocation results from articles of food blocking up the throat, the treatment recommended in choking must be had recourse to. Should the suffocation be the result of breathing coal-gas or sewer-gas, or by being in a room in which charcoal has been burnt, get the patient into the fresh air as speedily as possible, dash cold water in the face, and then perform artificial respiration.

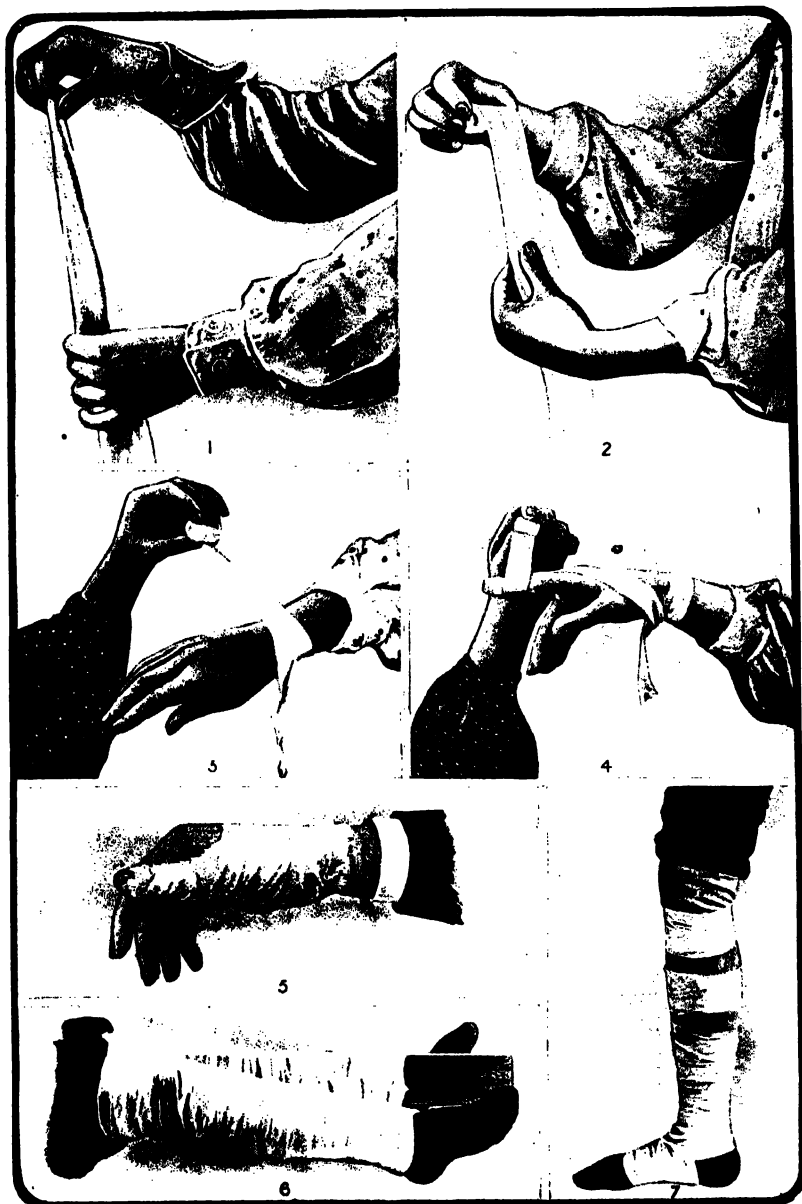
Sunstroke.—Dash cold water over the face and head, apply ice or ice cloths or cold water to the head, and give a teaspoonful of spirit of sal-volatile in water. Tea or coffee may be given afterwards. The patient should be placed in the shade as soon as possible.

Swallowing a Stone or Coin.—If symptoms of choking follow, act as directed in the paragraph "Choking." If a stone has been swallowed or a small coin, and if it has apparently passed into the stomach, a quantity of porridge or hasty pudding may be taken, to be followed 2 hours later by a dose of castor-oil. A doctor should be consulted, and if the article should have stuck in the gullet, he may be able to recover it by means of an instrument called the coin catcher.

Wounds, Bites and Stings.—The simplest are those in which the tissues are clean cut through, and where the edges, when brought together, fit accurately the one to the other. Remove all dust or dirt from the region of the wound by thorough washing with pure soap and water, and bring the edges carefully together by means of a bandage or strips of plaster. Keep at rest for a few days.

Contused or lacerated wounds should be treated by cleansing the parts with disinfectant or antiseptic and water, carbolic acid and water (1 teaspoonful of the acid to 8 or 10 ounces of water), or Condy's Fluid and water, then place

NURSING. No. 1.



1 and 2. To roll a bandage. 3, 4, and 5. To bandage a finger. 6. To bandage a rickety child. 7. To bandage varicose veins.



1. To bandage a broken arm. 2. A ready sling for injured arm. 3. To bandage broken wrist. 4. Splints and bandage for broken leg.

a piece of lint or rag soaked in carbolic lotion (1 part in 20 of water) over the wound, and draw the edges as nearly as possible together. If it still contains gravel or dirt, boroglyceride fomentation (as described in "Recipes for Sick Nurses") should be regularly applied when the bleeding has ceased.

Perforating wounds are dangerous because of their depth, and the greater possibility of their containing dirt. The best treatment is to foment them from the first with hot boroglyceride fomentations, and to ensure that they heal from the bottom upwards.

Gun-shot Wounds.—If a stimulant is necessary, give a teaspoonful of spirit of sal-volatile in water. Remove pieces of clothing, wadding, or bits of paper that may be found in the wound, then bathe it with carbolic acid and water, or some other disinfectant and water, and foment as in the case of perforating wounds.

Poisoned Wounds may result from a number of causes, such as stings of insects, snake-bites, the bites of rabid animals, etc.

Dog-Bites.—When any one is bitten by an animal supposed to be mad, unless the actual fact of the animal's madness is already known, it should be kept and carefully watched; if it is found not to be suffering from rabies, no ultimate harm will result to the patient. The rabies will soon make itself apparent, for, if mad, the dog will be seen snapping at imaginary objects, with a copious flow of saliva from the mouth, and a convulsive closing of the jaws.

TREATMENT.—The wound should be thoroughly cleaned with carbolic lotion 1 in 20. It should then be cauterised

with lunar caustic or a red-hot wire, and bandaged up. Stimulants, such as the spirits of sal-volatile in teaspoonful doses, may be given every 2 or 3 hours.

Snake-Bites.—Bites received from serpents abroad are often exceedingly formidable injuries, and may be followed by death within a few hours, so that prompt action is necessary.

TREATMENT.—The part should be at once sucked. A very tight bandage should then be applied just above the wound, either by means of a strong elastic band, a leather strap, or a handkerchief twisted tightly with a stick. The wound should then be freely cauterised by means of a red-hot wire or a red-hot cinder; or the part may be cut out with a knife; or caustic, such as nitrate of silver, may be applied; a red-hot wire is, however, the best. Stimulants, especially preparations of ammonia, must be freely given. A teaspoonful of ammonia should be put into a wineglassful of water, and the patient given 1 tablespoonful every quarter of an hour. If those present are afraid to suck the wound, a wineglass into which a piece of burning paper has been put to exhaust the air, should be inverted over it. Treatment by anti-toxins has been successfully used.

Stings.—If the sting still remains in the wound, it must of course be removed; then some alkaline lotion should be applied to the part, such as a little ammonia water, liquor potassae and water, or bicarbonate of soda and water. The pressure of a hollow ~~they~~ will often force a sting sufficiently above the skin to allow of it being seized with tweezers.

RECIPES FOR THE SICK NURSE

Bandaging.—We need only mention here a few simple bandages that could be applied by a non-professional nurse. Every one should know how to roll a bandage. The great knack of rolling it is to get it perfectly tight and even. The first few turns can be taken round a knitting needle, which should then be withdrawn. Nursing Illustration

No. 1, figs. 1 and 2, show clearly how to do this.

In cases of broken bones send at once for the doctor, but pending his arrival do not move the patient unless splints have been applied to the injured part.

In applying a bandage to the legs of a rickety child, for instance, place the splints (a plain piece of wood wadded

with wool) on the inside of the leg, the end projecting an inch or two below the foot, and pass the bandage (outer side against the skin) completely around splints and leg at the ankle, once; then simply wind it round and round upwards and fasten with a safety pin. A bandage about 3 yards long and 2½ inches wide would be required for this purpose. (See Nursing Illustration No. 1, fig. 6).

A bandage for a finger would be from half an inch to an inch wide. To apply it, one or two turns round the wrist should be taken first, from under to over, then the bandage should be brought along the back of the hand and wound spirally down the finger from the tip, wound down to the root, crossed over the back of the hand, passed twice round the wrist, and the two ends tied together. (See Nursing Illustration No. 1 figs. 3, 4 and 5.)

In bandaging a wrist, begin by placing the end in the palm of the hand; pass the roll over the thumb-joint, thence once completely around the hand above the thumb (thus holding the end firmly in position), then wind it closely up and up the wrist and arm, making reverses with the finger as the arm gets thicker.

Blisters (to Apply).—Wash the skin with soap and water, warm the blister at the fire and lay it on, leaving it there for seven hours or more till it rises. Snip the bladder then formed with sharp-pointed scissors to let the water out, then dress with ointment spread upon lint. The ointment should always be spread on the smooth surface of the lint.

Camphorated Spirits of Wine.—(*Useful as an Embrocation for Sprains, Rheumatism, Chilblains, etc.*)—Dissolve 1 oz. of camphor in ½ a pint of rectified spirits of wine. Keep well corked down.

Colds.—(*A most Efficacious and Simple Remedy for a Severe Cold in the Head.*)—Take a small basin, put into it boiling water and strong camphorated spirit, in the proportion of 1 teaspoonful of spirit to ½ pint of water. Wring out a sponge in this as hot as possible, and apply it to the nose and mouth; draw in the steam with the nose first and then with the mouth;

swallow the steam, and, to prevent any escape, cover the head with a flannel. Continue this treatment for several minutes, having another hot sponge ready when the first gets cool. Sponges so wrung out in the same mixture may with great benefit be applied outwards to the throat and chest.

Camphorated sal-volatile is a good medicine for a cold, 30 drops in a wine-glass of warm water several times in the course of the day.

Cold Affusions.—In certain cases of fever as well as in other conditions, where the nerves require to be stimulated, a cold affusion is sometimes employed. The patient is placed in an empty bath and water at a temperature of 50° F. thrown over him for about five minutes. This method should never be employed where there is any suspicion of heart disease, or where the patient is so weak that his capacity for re-action is feeble.

Cold Applications.—Cold, when applied, must operate steadily, uniformly, and over a definite space. If the bag of ice or the cold cloths slip about as the feverish patient turns and twists, it is useless, perhaps harmful: if it is allowed to become warm before being renewed, it had better not have been applied.

(1) **COLD CLOTHS.**—Apply single folds of linen or cotton dipped in cold water and replace them by fresh cool ones before they become warm.

(2) **COLD DRIP.**—Stand a pitcher of water on some bureau or table higher than the patient's bed. Put one end of a long strip of lint or lamp-wick in the pitcher and lay the other across a cold cloth, which is applied to the inflamed part. A continuous little trickle of cold water is thus conveyed to the part, and the water which passes from it must be caught in a basin on the other side.

(3) **COLD DROP.**—A bottle filled with cold water can be suspended above the bed sometimes, where there is a curtain ring in the ceiling, for instance, and a piece of lamp-wick half in half out, and made to hang just over the part to which cold is to be applied. A constant drop of cold water is thus secured. Care must be taken that the water is conveyed into a basin and not

allowed to soak the bed. This cold drop is more easily used with a wounded arm or leg, which can be placed in a trough made of indiarubber cloth and sloping towards a basin or pail. An excellent fixture for applying continuous cold consists of a rubber bag with a flexible tube at either end—one being attached to a faucet or water-cooler and the other hanging over a pail. The bag, through which a stream of cold water is passing, is applied where desired, having between it and the part a damp cloth.

(4) ICE.—Ice may be broken up into pieces and put into a bladder, or an indiarubber ice bag. The bladder should not be more than half full and should be securely tied around the neck. The best way of applying ice to the head is to place a smooth piece of ice, two or three inches long and about one and a half broad, in a cup of soft sponge and pass it round over the head. The sponge absorbs the water and the pain of the cold is avoided.

(5) ICE-BAGS.—Put pounded ice with a little water into a thin bladder or indiarubber bag. The water remains cold until the last bit of ice is melted; renew before this. By these bags, continuous cold is secured and no danger from frostbite need be apprehended. Ice can be easily pounded by wrapping it tightly in one end of a thick cloth and then slinging the cloth with force against a stone hearth. Do not fill the ice-bag full; half-filled, it adapts itself better to the heated part.

Cold Cream.—A very simple way of making this is to put 1 lb. of lard in a basin and fill up with boiling water. When cold, and the lard has risen to the top, take it off and repeat the process. When again cold, whisk it up with a paper knife until it becomes a perfectly smooth cream, then add enough essence of lemon to give it perfume.

Cold Cream Unguent (*Used as a Mild Unguent to Soften the Skin, Prevent Chaps, etc.*).—Dissolve 2 ozs. of spermaceti, $\frac{1}{2}$ of an oz. of virgin wax, $\frac{1}{4}$ of a pint of oil of sweet almonds by steam, then beat them till quite cold in half a pint of rose-water.

Court Plaster.—Make a strong jelly with isinglass by putting it into warm

water to soak for three days, evaporating the water, dissolving the results in spirits of wine, and then straining. Stretch a piece of thin black silk upon a frame (a work-frame answers well for this) making it perfectly tight, then melt the jelly and coat the silk with it thinly. Repeat the coating when it has cooled, then give the plaster two coats of balsam of Peru in the same way.

Cuts.—To promote rapid healing the essential thing is to make the wound and surrounding skin absolutely clean by washing thoroughly with pure soap and hot water. When clean, rinse in fresh water and carbolic lotion (carbolic acid, 2 teaspoonfuls; water, 1 tumblerful), if available. Then apply a firm bandage of clean old linen rag. If the bleeding from a cut is profuse, a few turns of bandage firmly applied over the bleeding part will stop it until medical assistance arrives.

Disinfectants.—The atmosphere is a great disinfectant, partially by its removal of contaminating matter and partially by its power of oxidation. Water is the next great disinfectant employed by Nature. As putrefaction, however, will not take place in the absence of moisture, water may also be regarded as one of the greatest promoters of corruption. Water acts as a disinfectant by the simple act of washing. Every shower of rain, every river and stream, removes from the land a certain quantity of substance susceptible of decomposition. The ocean bears the decaying matter farther from the land, mingles it with pure water, dashes it about in the air, and thus produces oxidation and purification. Soil or fresh earth is another great disinfectant and, in conjunction with air and water, one of the most efficient of all known agencies. Organic and putrid substances sinking into its porosities in solution and mixed with air becomes of necessity oxidized. Water impregnated with every impurity in sinking through the earth is filtered and is only deleterious where the abundance of animal matter is more than can be acted upon by the soil. With the great deodorizing power of common earth, every one is familiar. "In fact," to quote Dr. Letheby,

"the graveyards of every city testify to the enormous quantities of organic matter that can be disposed of through its agency; and no one who has witnessed the rapid deodorizing power of clay, when sewage or night-soil is distributed upon the land, can doubt its efficacy. The Chinese have long taken advantage of this power, for they mix night-soil with one third of its weight of fat marl and knead it into cakes, which are common articles of commerce. In practice, also, it has been found that a ton of clay will completely deodorize about three tons of the solid matter of sewage." Light is another natural disinfectant and tends to promote oxidation. Heat and cold are likewise powerful disinfectants—partly natural, partly artificial. As a means of immediate disinfection of contaminated garments, bedding, and even close apartments, ships, etc., heat is at once a cheap and most effectual method. The boiling of infected clothing, etc., is admitted to destroy effectually any contagious poison, and practically, upon a large scale, experience proves that it is best to employ steam as a means of heating. It is probable that no circumstance contributes more directly to the perpetuation and spread of typhus fever than the accumulation and bad management of contaminated clothing, etc., that ought, in all circumstances, to be purified (by heat) as soon as it leaves the patient or the bed. Frost or low temperature, when continued for a sufficient length of time, will effectually destroy miasma; but it should be noted that a freezing temperature does not appear to mitigate the personally infectious poisons, or contagions (i.e., small-pox, etc.), though, with certain exceptions, it arrests putrefaction and the action of fermentation.

The principal chemical disinfectants which can be used in fluid form in large quantities are carbolic acid and solutions of corrosive sublimate or perchloride of mercury, the requisite strength of the former being one part in twenty of water and that of the latter one part in one thousand. Carbolic acid is commonly used in far too dilute a form to have much real value as a disinfectant, for in order to destroy germ

life it is necessary to use at least five per cent. solutions in water, and the action must be prolonged. When we speak of a disinfectant of a certain strength as being an efficient germicide we must bear in mind that this solution must come in contact with the germs to be destroyed without being further diluted. Of all chemical disinfectants solutions of corrosive sublimate are probably the most efficient and the cheapest, one ounce of corrosive sublimate being sufficient to make over sixty gallons of really powerful disinfecting solution.

It is, however, most important to remember that none of these agents, valuable as they are, can take the place of ventilation and free currents of air. In a sick-room a small fire should be kept up, and the door or window opened for a few minutes three or four times a day, but not so as to place the patient in a draught. It is important to have the air thoroughly renewed. Charcoal should be placed about the room, or some carbolic acid should be sprinkled about. Disinfectants are not only of much service in purifying the air in the above-mentioned cases, but they are equally valuable in destroying the noxious emanations from sewage; for this purpose numerous measures have been suggested. Charcoal may be employed, but it is not so useful here as in purifying the air. It must never be forgotten that there is a cardinal difference between a disinfectant and a deodorant—where it is only a question of an unpleasant smell and nothing more, a deodorizer will suffice; but in all cases where noxious germs are present, or are likely to be present, the use of a disinfectant is imperative. Dry earth is used in earth-closets and has been found very valuable in large institutions and camps; the excreta are at once covered over and no effluvium escapes; in this way diarrhoea and typhoid fever have been prevented. Quicklime and water may be added to the sewage until a deposit occurs. The lime forms insoluble salts and decomposes the sulphuretted hydrogen; it delays, but does not prevent, the decomposition of animal and vegetable matters. Perchloride of iron is also useful: it decomposes

sulphuretted hydrogen and carbonate of ammonia, which is so often met with in sewage. A solution of chloride of zinc (half a pound to a gallon of water) may be used; it will destroy ammoniacal compounds and organic matter; it delays decomposition for some time. Permanganate of potash must be used in very large quantities to have much effect on sewage; it is useful in deodorizing excreta and may be poured on the stools of patients suffering from cholera or typhoid fever. The preparations from coal tar, as creasote, carbolic acid, and cresylic acid, are very valuable agents in purifying sewage; they may be obtained as powders or crystals, or liquids; the latter are the most useful, as they mix readily with sewage. It does not follow, as we have said, that because air smells badly it is therefore dangerous; gas-works or tan-works may be disagreeable, but they are not injurious; again, a cess-pool or drain may not smell much, but the exhalations may be most dangerous. A noxious smell is like a Davy lamp to a miner, a warning of danger, but it is not itself the danger. By keeping in mind the evils arising from impure air, close rooms, noxious emanations, and sewage contaminations, and by using every means to procure ventilation and to remove the impurities by chemical means, a vast deal of good must result and many diseases may be prevented.

Disinfectants.—1. For water-closets, vessels, stationary tubs and basins, and bath-tubs, and any other drain-pipe.

Hot water	2½ gallons,
Copperas	4 pounds,
Carbolic acid	4 ounces,

Mix well together and pour into the foul place.

2. For swill-pails.—When empty, sprinkle with chloride of lime and rinse well in clean water after a few hours.

3. Cesspools, their overflow, and privies.—Dry copperas or chloride of lime, by the shovelful.

4. For disinfecting erysipelas bandages, poultice-cloths, etc.

Carbolic Acid	4 ounces.
Hot water	1 gallon.

Soak the articles twelve hours, then

wash and use only for the same case. Burn them afterwards.

5. For washing bed and body clothing in erysipelas, small-pox and other contagious diseases.

Sulphate of zinc	2½ ounces.
Carbolic acid	4 ounces.
Hot water	1 gallon.

Soak the articles twelve hours, then wash; use only for the same case and burn them afterwards. *Hot water is necessary, as carbolic acid is very slightly soluble in cold water unless combined with glycerine.

Disinfectants, to be effective, should be freely used and garments or cloths put to soak should be fully covered with the liquid and occasionally stirred.

Embrocations and Liniments.—These preparations have the consistence of oil. They are more active than ointments and act as local stimulants, relieving deep-seated pain and inflammation.

CHILBLAIN LINIMENT.—Take an ounce of camphorated spirits of wine; half an ounce of solution of subacetate of lead, or Goulard's extract. Mix and apply three or four times a day.

EMBROCATION FOR SPRAINS AND BRUISES.—Take half an ounce of laudanum and mix it with an ounce and a half of compound liniment of camphor. When the more active symptoms have passed away this forms a useful application for relieving pain. It is also useful in pains of a rheumatic character.

LINIMENT FOR BRUISES WHEN THERE IS INFLAMMATION.—Take of solution of acetate of ammonia and soap liniment, of each an ounce; mix. May be applied frequently when the bruised part is inflamed.

LINIMENT FOR RHEUMATISM.—Take half an ounce of belladonna liniment and an ounce and a half of liniment of opium; mix. This is soothing application in sprains and affections of a rheumatic or neuralgic nature.

LINIMENT FOR UNBROKEN CHILBLAINS.—Take 1 teaspoonful of flour of mustard, half a pint of spirits of turpentine, infuse the mustard in the turpentine, shake it well during twenty-four hours; then strain it off quite clean through muslin. Apply the clear liquid to the chilblains and rub it well in.

LINIMENT FOR WHOOPING COUGH.—Take of belladonna liniment, two drachms ; soap liniment, or opodeldoc, one ounce and six drachms ; mix. May be rubbed, night and morning, into the spine of a child five years old suffering from whooping cough.

ROCHE'S EMBROCATION.—Take of olive-oil four ounces, oil of amber two ounces, oil of cloves sufficient to scent it strongly ; *mix. When rubbed on the chest it acts as a gentle stimulant to the skin and may be rubbed over the spine in cases of whooping cough.

STIMULATING LINIMENT.—Take of compound liniment of camphor and soap liniment, or opodeldoc, of each an ounce ; mix. This is a useful outward application in cases of ordinary sore throat. A piece of flannel warmed at the fire should be put on after the rubbing is completed.

STRONG STIMULATING LINIMENT.—Take of strong liniment of ammonia, an ounce and a half, oil of turpentine, half an ounce ; mix. This is an excellent rubefacient liniment, and is useful in chronic rheumatic affections.

Emulsions.—Emulsions are mixtures of bland mucilaginous substances with water, and are used to allay irritation in the lungs, alimentary canal and other parts, and likewise as vehicles for certain substances which could not otherwise be so conveniently taken in a liquid form.

COUGH EMULSION.—Take of gum ammoniac, two drachms ; water, half a pint. Rub the ammoniac well, gradually adding the water, until they are thoroughly mixed, and then strain through linen. This emulsion forms a useful expectorant in old coughs and asthma when no inflammatory symptoms are present. The dose is from one to two tablespoonfuls united with an equal quantity of almond emulsion.

EGG EMULSION.—Rub the yolk of two eggs and a little sugar with a pint of cold water, adding to it afterwards a glass of Rhenish or other light foreign wine and a little lemon juice to give it a flavour. This forms a very nourishing restorative drink of great benefit in cases of debility and when a patient is recovering from an attack of some severe disease where mild stimulation

is required. Without the wine the emulsion is a good remedy in cough, hoarseness, spitting of blood and constipation.

EMULSION OF GUM ARABIC.—Take of gum arabic in powder, two drachms ; blanched sweet almonds, and white sugar, of each half an ounce ; barley water, warm, a pint ; dissolve the gum in the warm barley water and, when it is almost cold, pour it gradually upon the almonds, previously beaten to powder with the sugar, rubbing them at the same time, so as to form a milky mixture ; then strain. This is a useful demulcent in common colds, difficulty in passing water and general irritation about the urinary organs, and is a pleasant vehicle for the exhibition of more active remedies in these and other complaints.

Enema.—When food or medicine is introduced in a fluid form into the lower bowel, it is termed an enema, or, in older phraseology, a clyster. The best way to give an enema is to place the patient on his left side, so near the edge of the bed that part of his body may project over it. The pillow must be removed to keep his head low—the head lying towards the centre of the bed—and in order to give proper height to the hips the pillow should be doubled and laid beneath them, the object being to enable the liquid to pass up into the bowel by its own weight and also to be retained as long as possible. A waterproof sheet should be placed over all the bedding and other materials on which the patient is lying. The nozzle of the Higginson's syringe (the best type to use), which should not be more than three inches long, should be anointed with vaseline and inserted very gently into the bowel and the soap and water (or other enema) slowly admitted. Should the water return too soon, the buttocks must be pressed together round the nozzle. When the enema has been introduced the patient must remain quiet and make no effort at expulsion, leaving this entirely to the action of the enema. As there will be a natural inclination to expel, the patient must be cautioned to try to retain the enema so that it may act for itself. If a nurse is not in attendance and there be any

doubt as to how the enema should be administered, the safest plan will be to ask the doctor to give it. An enema may be employed with advantage in cases of prolonged constipation, when it is better and easier to act upon the hardened mass from below than from above. Many substances may be employed, but there is none better than plain soap and water. If this does not succeed, half an ounce of castor oil and half an ounce of turpentine may be beaten up with an egg and a pint of hot water added. In making use of enemata for this purpose, not less than a pint should be used; for the normal stimulus to the bowel to act is distension. If, on the other hand, it is desired that the enema should be retained instead of being expelled, the smaller the quantity used the better. This is the case when from disease of the stomach it is impossible or unadvisable to give food that way, and small quantities of beef-tea, etc., may be thrown up the bowel. Then not more than a couple of ounces should be used at a time. This too is the case when opium enemata are prescribed as they sometimes are for the disease of the lower bowel or neighbourhood. Enemata, we have stated, are given either to relieve or control the bowels, or for the purpose of nourishing a patient not able to take food by the mouth. For the first purpose, from one to two pints of liquid may be used; warm soapsuds, with castor oil or sweet oil, in such proportions as the doctor may order; or, where diarrhoea is to be controlled, less fluid, probably thin starch mixed with cold water, and some astringent or opiate, as thirty drops of laudanum; in all cases the doctor's directions must be asked and followed. For nourishment, various things may be given: beef-tea, milk and brandy, strong soups, beef-juice and brandy, etc., as prescribed; but for nourishing enemata not more than four to eight ounces should be given. More than this may simply irritate and not be retained: therefore at times it may not be expedient to administer more than two ounces. The fluid must be retained as long as possible and no effort made to discharge it.

OIL ENEMA.—Either sweet or castor oil given clear, six to eight ounces.

SALT ENEMA.—Give one ounce and a half of salt in one pint of gruel, warmed.

Fomentations.—A fomentation is an external application of a hot fluid, generally by means of a flannel, to some affected internal organ such as the throat, or to the muscles round a joint, with the object of procuring relief of pain by exciting a greater flow of blood to the skin covering the affected part. What the hot bath is to the whole body, indeed, the fomentation is to a part. The swelling which accompanies inflammation is rendered much less painful by fomentation, owing to the greater readiness with which the skin yields than when it is harsh and dry. As the real agent of relief is the heat, the fomentation should be as hot as it can comfortably be borne, and to ensure effect should be repeated every hour. Fomentations are of various kinds: emollient, when an infusion of mallows is required; sedative, when poppy-heads are used; but the most simple and oftentimes the most useful that can be employed is hot water, applied by a flannel.

BORACIC FOMENTATIONS.—May be made with boracic lint; that is, lint impregnated with boracic acid. A piece of this lint, of suitable size, is wrapped in a cloth and wrung out in boiling-water. It is then applied to the part, and covered with protective wool, and a bandage.

Boracic fomentations should always be used in preference to bread or linseed poultices in cases of poisoned fingers, whitlows, abscesses, boils, etc. They do not retain the heat quite so long, but on the other hand are much cleaner than poultices, which become very offensive if the skin breaks or discharge is present.

BOROGLYCERIDE FOMENTATIONS.—Are made by wringing out ordinary lint in a solution composed of 1 teaspoonful of boroglyceride to 1 pint of boiling water. Apply as above.

HOT-WATER FOMENTATION.—The best application of this kind is made by wringing coarse flannel—by means of two sticks turned in opposite directions—out of boiling water, and, shaking it

up, applying it lightly to the part. Or the steeped flannel may be placed in a towel, and the excessive water quickly twisted out. It is advisable to have two pieces of flannel ready, each about 3 yards long. While one is being used, the other may be getting ready. When turpentine has to be added, lightly sprinkle it on the side next the skin. Cover the flannel used to foment with wool and oiled silk.

SANITAS FOMENTATIONS are sometimes used. They are prepared in the same way, viz., 1 teaspoonful of Sanitas to 1 pint of boiling water. Wring out the lint and apply in usual way.

Infusions.—Infusions are preparations made by pouring water, either cold or boiling, over vegetable substances so as to extract their principles. The substances to be acted upon are generally prepared by being bruised in a mortar, sliced or coarsely powdered. The time of infusion varies from ten minutes to two hours, after which the fluid is strained. The following infusions are useful :—

CINCHONA BARK, INFUSION OF.—Take of yellow cinchona bark, bruised, half an ounce, boiling water, half a pint. Infuse in a covered vessel for two hours and strain. Dose.—One to three tablespoonfuls. This infusion possesses the strengthening properties for which cinchona bark is noted and may be used during convalescence from acute diseases.

DIURETIC INFUSION.—Take of dried foxglove leaves, half a drachm or thirty grains; boiling distilled water, half a pint. Infuse in a covered vessel for an hour and strain. This infusion is usefully employed as a diuretic and may be administered in doses from a dessertspoonful to one or two tablespoonfuls, according to circumstances.

LINSEED, INFUSION OF.—Take of linseed half an ounce; liquorice root, sliced, two drachms; boiling water, a pint. Infuse for four hours in a covered vessel and strain. When taken in large quantities, this infusion acts as a mild diuretic and is useful in inflammation and irritation of the urinary organs. Honey or sugar candy may be substituted for the liquorice root and it may be flavoured with

lemon, when it will form a useful demulcent drink in recent coughs.

SENNA, COMPOUND INFUSION OF.—Take of senna leaves, an ounce and a half; ginger root, sliced, a drachm; boiling water, a pint. Infuse for an hour in a covered vessel and strain. This is a safe, stimulating purgative, useful in constipation. Generally, some saline purgative, as Epsom salts, is given along with it, the infusion of senna being made the vehicle. It may be given in doses of one or two ounces.

The following are excellent and simple bitter tonic infusions for household and home use. These preparations may be taken in doses of one or two ounces twice or thrice a day. They all act as bitter tonics and stomachics, and are useful in indigestion and general debility.

CALUMBA.—Take of calumba root, cut small, half an ounce; cold distilled water, half a pint; place in a covered vessel for an hour and strain.

GENTIAN.—Take of gentian root, sliced, half an ounce; dried orange peel, bruised, coriander seeds, bruised, of each a drachm; boiling water, twelve ounces. Macerate for an hour in a covered vessel and strain.

QUASSIA.—Take of quassia chips, a drachm; cold distilled water, half a pint. Macerate in a covered vessel for half an hour and strain.

Lotions.—Lotions are usually applied on lint or rag, which has been previously soaked in the lotion required. If it be desired to produce a cooling effect by the evaporation of the lotion, only one layer of very thin material should be used.

ANODYNE LOTION.—Mix 1 oz. of soap liniment, $\frac{1}{2}$ an oz. of laudanum, and 8 ozs. of water together. This forms a useful soothing application to an inflamed and painful part, but care must be taken to see that the skin is not broken.

ANOTHER.—Take 2 drachms of sugar of lead, 1 oz. of laudanum, and 8 ozs. of water; mix them together and apply to the painful part.

ARNICA LOTION.—Tincture of arnica, in the proportion of a teaspoonful to 2 ozs. of water, is a useful application in sprains and contusions.

EVAPORATING LOTION. No. 1.—A

simple evaporating lotion is one part of alcohol to eight of water. Bay rum or eau-de-Cologne may be substituted for the alcohol. The following is a very good formula: muriate of ammonia, 12 grains; alcohol, 36 minims; water, 1 oz.

EVAPORATING LOTION, No. 2.—Equal parts of vinegar and eau-de-Cologne or lavender water, diluted with an equal quantity of water and used as above.

EVAPORATING LOTION, No. 3.—Take of chloride of ammonia (sal-ammoniac), half an ounce; of nitre, an ounce. Dissolve in water and apply as a cooling, refrigerating lotion in recent sprains, bruises and inflammatory affections of the brain.

EVAPORATING LOTION, No. 4.—Salammoniac, $\frac{1}{2}$ an ounce; vinegar, 5 ozs.; rectified spirit, 5 ozs.; water, a pint. Mix together. This is a useful application in sprains and bruises, and also for the head in cases of inflammation of the brain. Rags steeped in the lotion should be kept constantly applied.

STIMULATING LOTION.—1 oz. of compound camphor liniment, mixed with 1 oz. of soap liniment, may be rubbed upon the chest with the hand in cases of chest cold, or applied on a flannel round the throat in quinsy.

VINEGAR LOTION.—One part of vinegar to three of water is a commonly-used lotion for sponging invalids. Equal parts of vinegar and water may be usefully employed for bruises.

Ointments for Chapped hands.—**INGREDIENTS.**—1 oz. of bitter almonds, oil of sweet almonds, the yolk of 1 egg, and a little tincture of benzoin; 10 drops of oil of caraway.

MODE.—Blanch the almonds, beat them to a paste by working in gradually the oil of sweet almonds and the egg, then add the benzoin and oil of caraway, and beat till the ointment is of the consistency of thick cream. Before going to bed, the hands should be well washed with soap and warm soft water, thoroughly dried with a soft cloth, and the ointment then rubbed well into them. It is desirable to keep the hands covered with a pair of soft kid gloves while the ointment is upon them.

Another ointment can be made with Goulard's extract, 1 fluid drachm; rose-water, 1 fluid oz.; spermaceti ointment, 2 ozs. Melt the ointment, and rub it up with the extract of Goulard mixed with the rose-water. Apply in the same way.

Poultices.—A poultice, unlike a mustard-plaster, should be made larger than is absolutely necessary. It is intended to allay pain and inflammation and, as the pain probably extends beyond the inflamed part, a large poultice should be made to cover the surrounding surface. Spread it on a stout piece of cotton. Let it be from half an inch to an inch thick. Do not pat it down into a hard pudding. Make the edges as thick as the middle, or else they dry rapidly and are painful. Cover the surface of the poultice with a very thin gauze or muslin, or bit of mosquito-bar, or lace, so that it shall not stick to the surface and can all be removed at one time. In applying to the chest, do not cover the nipples if it can be avoided. Have the cloth on which it is spread large enough to double up all round the four sides, over the edges of the poultice, that it may not ooze out. Have everything ready and the patient's clothing unfastened, before you bring the poultice to the bed. Apply it immediately as warm as it can be borne. Cover it with oil-silk or rubber-sheeting and then a flannel. Keep it firmly fastened to the place it is intended to cover and renew it before it is cold. Its purpose is defeated if it becomes a stiff cold paste, or if it is allowed to slip about in an unsteady way. Linseed is better than anything else for an ordinary poultice. When oil is needed to spread over the surface of the poultice, use vaseline: it does not become rancid. Never use milk in making poultices; it quickly becomes sour and is of no value in itself. A good and very simple poultice can be had from a piece of soft, thick sheet lint, doubled, squeezed out in hot water, laid over the part, and covered with a larger piece of rubber-sheeting, which is useful for such purposes and is very thin.

BRAN POULTICE.—Place the quantity of bran required, according to the

size of the poultice, upon the top of boiling water, and when the heat has penetrated the bran, stir it gently in. Pour off the superfluous water, spread the bran thickly on a piece of clean old linen or calico, and apply the poultice as hot as it can be borne. A layer of fine muslin should intervene between it and the skin. The poultice must not be in a sloppy state.

BREAD POULTICE.—Boil about $\frac{1}{2}$ of a pint of water in a small, clean, lined saucepan. Into this put 2 ozs. of stale bread without crust, and let it soak for a few minutes. Pour off, and lightly press out the superfluous water, spread the pulp thickly between two pieces of muslin or clean old linen, and apply hot, with one or two thicknesses of clean old rag outside to keep the heat in.

BREAD POULTICE (another Recipe).—Cut a slice of crumb of bread—the size required—out of a stale loaf, put it in a warmed basin, and pour boiling water over it; leave it for a few minutes, covered with a plate, to soak. Then drain off all the water, spread the poultice on a piece of soft linen rag, and apply it as hot as it can be borne. It is much neater and generally as efficacious to wrap the poultice up in fine muslin, so that the bread does not adhere to the skin, and the whole may be removed without any mess. Rag must be placed outside in either case, to keep the heat in.

BREAD-AND-WATER POULTICE (Abernethy's Plan).—First scald out a basin; then, having put in some boiling water, throw in coarsely-crumbled bread, and cover it with a plate. When the bread has soaked up as much water as it will imbibe, drain off the remaining water, and a light pulp will be left. Spread this a third of an inch thick on folded linen, and apply it when of the temperature of a warm bath. To preserve it moist, occasionally drop warm water on it.

CHARCOAL POULTICE, No. 1.—For a charcoal poultice take two ounces of bread-crumbs and soak for ten minutes in ten ounces of boiling water, then mix and add gradually half an ounce of powdered wood charcoal and one and a half ounces of linseed meal. The whole should be well stirred together

and then spread and applied in the ordinary manner.

CHARCOAL POULTICE, No. 2.—Another method adopted in making this poultice is to take half an ounce of wood charcoal, two ounces of linseed meal, and boiling water sufficient to make a poultice.

CHLORINATED SODA POULTICE.—A chlorinated soda poultice is made like a linseed meal poultice, but consists of two parts of linseed meal to one of chlorinated soda mixed with boiling water.

HEMLOCK POULTICE.—Take two ounces of hemlock leaves in powder, six ounces of linseed meal and a pint of boiling water. Mix the linseed meal with the powdered hemlock and add gradually to the water, keeping up constant stirring while doing so. This poultice was more frequently used formerly than now and was applied because of its sedative and soothing qualities to alleviate the pain of cancerous and other malignant sores. The best poultice is that which is made of fresh hemlock leaves bruised; the dried and powdered leaves are apt to be inert.

IRISH MOSS POULTICE.—In Paris, carrageen, or Irish Moss, has been used as a substitute for linseed meal and other kinds of poultices, with good results. It does not ferment and remains moist and inodorous for sixteen or eighteen hours, when properly prepared by chopping and soaking.

LINSEED-MEAL POULTICE.—A linseed poultice being always needed hot, care should be taken that it is made so. Put the meal into the oven to heat for a quarter of an hour, and scald out with boiling water the basin in which it is to be mixed. Have also in readiness 2 plates in the oven, and a piece of tow, pulled to shape, or a portion of old linen, upon which to spread the poultice. Into the basin put as much linseed as will be required, and pour on boiling water, stirring vigorously with a knife, until the mass is of the consistency of thick porridge. Then turn the contents of the basin out upon the tow or linen, spread the linseed to an even thickness, and turn the edges of the tow or linen in as quickly as possible. Roll your poultice

up and place it between the 2 hot plates to carry to the patient. Having put it on the patient, cover it with cotton wool or flannel to retain the heat as long as possible.

MUSTARD POULTICE.—This most useful application is made in a variety of ways. The simplest, the cleanest, and most efficacious for ordinary purposes, we believe to be the following: Take a piece of soft flannel, dip it in boiling water, wring it out immediately, and sprinkle one side of it with fresh flour of mustard. The flannel should be laid upon a hot plate while being sprinkled, that no warmth may be lost. Another way of making a mustard poultice is by spreading a large tablespoonful of mustard, made in the ordinary way as if for table, on a piece of soft linen, and warming it before the fire when it is to be applied. A third, and better plan if warmth be needed, is to make a common linseed or bread poultice and stir into it a tablespoonful of mustard, either fresh or mixed. It is generally desirable, with poultices made on either of the last two plans, to place a piece of fine old muslin or gauze between the poultice and the skin.

MUSTARD-AND-LINSEED POULTICE.—Mix equal parts of dry mustard and linseed-meal in warm vinegar. When the poultice is wanted weak, warm water may be used instead of the vinegar; and when it is required very strong, only a very little of the linseed-meal must be added to the mustard. Apply in the ordinary way.

YEAST POULTICE, No. 1.—A yeast poultice is made by mixing a pound of flour or linseed-meal with half a pint of yeast. The mixture is to be heated and carefully stirred.

YEAST POULTICE, No. 2.—Take of beer yeast, ten ounces; flour, sixteen ounces. Mix and expose the mass to a gentle heat till it rises, when it is ready for use. The yeast poultice acts as a stimulant and antiseptic and is employed with benefit in ill-conditioned or badly-smelling sores; also in cases of mortification to destroy fœtor and assist in removing the dead tissues.

Besides the poultices mentioned there are others in very frequent use,

such as those made from bread and water, oatmeal, arrowroot, bran; and others, which are much less employed, made from carrots, potatoes, onions, sweet apples, etc.

Scalds and Burns.—Before a doctor can be summoned it is always necessary to do something to allay the dreadful pain caused by either of these accidents. The clothing will have to be first most carefully removed, being cut away if necessary. A solution of carbonate of soda has a very soothing effect, if applied with a linen rag, continually moistened. Ice broken up and mixed with lard, if renewed directly the ice melts, will also greatly allay the pain from burns. A slight burn can be treated at once by rubbing soft soap well in, after which it may be oiled with carron oil (equal parts of olive-oil and lime-water), and floured. Cold water should be poured over a person when scalded before attempting to remove the clothing. Consult also, "What to Do in Case of Accidents."

Sling for an Arm.—A ready sling for an injured arm can be made from a large handkerchief or neck muffler, by folding it into a triangle, passing it under the arm, and tying the two ends into a reef knot at the back of the neck or on the shoulder. The apex of the triangle should then be brought around the elbow and pinned. (See Nursing Illustration No. 2, fig. 2).

Care should be taken in arranging this or any sling that it gives the required support to the arm, and cannot slip or give way.

If the sling is to support the hand, the part of the triangle that goes in front of the hand should be passed over the shoulder on the side of the neck opposite to the injured limb. If it is intended to support the elbow (as in the case of a fractured collar bone), the reverse should be the case, the outer part of the sling passing over the shoulder on the same side as the elbow that is to be supported. The sling should always be arranged so that the hand is raised a little above the level of the elbow. (See Nursing Illustration No. 2, figs. 2 and 3.)

Splints for a Broken Leg.—In cases of emergency, umbrellas, walking sticks, or broom sticks make excellent

splints. Tie one of these to the side of the limb by a handkerchief and

bandage as shown in Nursing Illustration No. 2, fig. 4.

DOMESTIC MEDICINES, AND THEIR USES

All drugs should be kept in bottles under lock and key, and should be properly stoppered and carefully labelled.

Alum (Dried).—This substance may be used with advantage in case of bleeding piles, leech bites or slight cuts. It should be freely dusted over the part after wiping it dry.

Antiseptics.—The use of antiseptics in surgery, a practice with which the name of Lord Lister will always be associated, has been the means of diminishing the risk of mortality to an enormous degree. It makes for what has been happily called "scientific cleanliness." Antiseptic treatment, in its most comprehensive sense, aims at purifying everything connected with an operation, or with cases which might become surgical, such as difficult labour. So regarded, every instrument, dressing, application, sponge, the surrounding atmosphere, the operating table, the nurses and the surgeons, and even the operation itself are all exposed to antiseptics in some form or another—solution, wash, or spray. The principle justifying the treatment is the exclusion of bacteria and germs, the appearance of which in wounds might set up putrefaction and blood poisoning. Every practitioner has his own preference in the matter of drugs, but the chief are carbolic acid, boracic acid, lysol, izal, formalin, eucalyptol, and corrosive sublimate. Since the adoption of antiseptic precautions puerperal or childbed fever, once the scourge of lying-in institutions, has become so rare that medical men hardly ever meet with it. Antiseptics, for similar reasons, are of great practical value in safeguarding the public health. They are constantly employed in street cleansing, the removal of offensive matter, the maintenance of urinals and water-closets and in many other sanitary processes. The name has also been given to a class of substances which give stability to organic matters, while preventing their decomposition. Familiar examples of sound antiseptic

agents are salt, used for preserving meat; glacialine used for preserving milk, fish and provisions generally; sugar, used for preserving fruits; vinegar, used in pickling; creasote and the empyreumatic oils of wood; heat, etc., applied in the smoking of meat.

Aperient Pills.—The following are formulae of a few useful aperient pills:

1. Extract of aloes, 1 grain; extract of nux vomica, $\frac{1}{2}$ grain; soap, 5 grains.

2. Compound extract of colocynth, $1\frac{1}{2}$ grains; extract of hyoscyamus, $1\frac{1}{2}$ grains; compound rhubarb pill, $1\frac{1}{2}$ grains; extract of nux vomica, $\frac{1}{2}$ grain.

3. Calomel, 1 grain; compound colocynth pill, 3 grains; extract of hyoscyamus, 1 grain.

Arnica.—This is a useful application in sprains and bruises. The tincture should be freely brushed over the part 3 or 4 times a day by means of a camel-hair brush.

Bi-Carbonate of Soda.—This drug is largely used in certain forms of indigestion, as well as in gout and rheumatism. The ordinary dose is from 10 to 30 grains. In cases of heartburn great relief is usually obtained by taking one teaspoonful of bicarbonate of soda in a little hot water.

Black Draught.—This is an aperient mixture made by dissolving $\frac{1}{2}$ lb. Epsom salts and $\frac{1}{2}$ oz. extract of liquorice in 14 oz. of senna tea with the aid of a little heat, then adding $2\frac{1}{2}$ oz. of tincture of senna and 10 drachms of compound tincture of cardamoms and sufficient senna tea to make up to 1 pint.

Boracic Acid.—This white powder forms a valuable dusting powder for all kinds of wounds. It is strongly antiseptic, and constitutes one of the most efficient forms of dry dressing. The wound which has been dusted with the powder should of course be covered with cotton wool or lint. A concentrated solution of boracic acid in water forms an efficient lotion for all wounds or inflamed parts; it is especially useful in case of the inflammation

of the eye. Boracic ointment is another useful antiseptic preparation of equally wide application.

Borax.—This substance, either dissolved in water or mixed with glycerine or honey, is used in the treatment of the white mouth of infants (thrush), or the small ulcers that are often met with on the mucous surfaces of the lips and gums. It should be freely applied to ulcers with a feather or small brush. For thrush, dip a clean soft linen rag in it, and wipe the mouth out.

Calomel.—This white powder is in frequent use as a stimulant of the liver and an aperient. The dose varies from 1 grain in the case of an infant to 4 or 5 grains in the case of an adult. It is well when a calomel powder has been taken at night to take a seidlitz powder or a dose of citrate of magnesia in the morning.

Camphorated Oil.—This is a useful application in chest colds, and chronic rheumatism in joints, or old sprains. It should be warmed at the fire or by placing the bottle in hot water, and then rubbed into the part with the hand for 15 to 20 minutes by the clock.

Carbolic Acid.—This is a substance obtained from coal tar by distillation. Its principal use is as a disinfectant, 1 oz. of carbolic acid shaken up with a pint of cold water being a powerful germicide. As an application to wounds, it should, however, be employed at about half this strength. The pure acid burns the skin if it comes in contact with it.

Cascara.—This useful aperient is most commonly taken in the form of tabloids; it may also be taken, however, in liquid form. The dose of the dry extract is 2 to 8 grains, and of the liquid extract from $\frac{1}{2}$ to 1 drachm.

Castor-Oil.—This is a gentle but efficient purgative. *Dose*: 1 teaspoonful to children, 1 tablespoonful to adults. It is useful in cases of obstinate constipation, or where an indigestible article of diet is giving rise to griping pain.

Citrate of Magnesia.—This is the popular name for an effervescing granular preparation containing bicarbonate of soda, tartaric acid, citric acid, sugar

and a little Epsom salts. It acts as a mild aperient.

Cod Liver Oil.—This oil, which is obtained from the fresh liver of the cod, is rather a food than a medicine. Now that its odour and taste are efficiently disguised it often forms a valuable form of fat which is tolerated by the most sensitive stomach. It is largely given in cases of consumption as well as in other diseases where there is much wasting.

Compound Decoction of Aloes.—This is a useful laxative, its action being principally due to the aloes which it contains. From 1 to 4 tablespoonfuls may be taken in water, the dose being repeated in a few hours if necessary.

Compound Liquorice Powder.—Compound liquorice powder consists of a sifted mixture of 1 part senna leaves, 1 part liquorice root and 3 parts sugar. It acts as a mild aperient, the dose being 1 to 2 drachms.

Condy's Fluid.—The simplest way of making an efficient substitute for Condy's Fluid is to dissolve 4 grains of permanganate of potash in an ounce of water. It is a valuable antiseptic lotion, two tablespoonfuls of this fluid being mixed with a quart of water; it may then be used for douching purposes or for bathing wounds. It should be remembered that it stains both linen and the skin.

Dill Water.—This is frequently given to children during teething, when they appear to suffer from flatulence, or are griped and uncomfortable. *Dose*: 1 teaspoonful to a child 1 year old.

Epsom Salts.—The dose for an adult is up to half an ounce. They should be taken the first thing in the morning with a warm drink afterwards. Epsom salts are useful in cases of lead-poisoning, or where it is desirable to increase the flow of bile, but are too violent in their action for habitual use in chronic constipation.

Friar's Balsam.—Friar's balsam or compound tincture of benzoin is used both externally as an antiseptic application to wounds and internally as an expectorant in chronic bronchitis. In the former case a rag dipped in the tincture is wrapped round the wound, and internally from 20 mm. to 1

drachm is taken in the form of an emulsion with sugar and mucilage or milk. A useful formulæ is the following :—

Tinct. Benzoin Co.	. . .	3 drachms.
Oxymellis Scillae	. . .	$\frac{1}{2}$ ounce.
Vin. Ipecac.	. . .	1 drachm.
Water to 8 ounces.		

Galle Acid.—This is useful in cases of spitting or vomiting of blood. *Dose* : 10 grains, with 15 drops of dilute aromatic sulphuric acid in water, for the blood-spitting, and alone in milk or water for vomiting of blood, every 3 or 4 hours.

Grey Powder.—This is a mixture of one part metallic mercury with two parts of chalk. It acts as an antacid and aperient. It is often given to children in doses of 2 to 5 grains, the dose for adults being from 5 to 30 grains.

Iodine.—The tincture of iodine is very useful as a counter irritant and as a help to absorption in the case of chronic swellings. Painted on the gums, it will often relieve toothache ; painted on swollen glands, it will help the swelling to disperse ; painted on such swellings as water on the knee, it will help the water to become absorbed.

Ipecacuanha.—Given as powder, 20 grains at a time, it is a useful emetic in the case of adults ; for children, in the form of wine, it is useful for the same purpose in doses of 1 teaspoonful in tepid water, repeated every quarter of an hour, and drinks of tepid water given between, and is often so administered in croup. In bronchitis and bronchial catarrh it may be given to children in doses of 2 to 5 drops every 3 hours on a lump of sugar, and a proportionately larger dose to adults.

Iron Alum.—This is a powerful astringent. It is useful in checking bleeding after extraction of teeth or in cases of bleeding from wounds. Wool moistened with a strong solution of the astringent should be applied to the bleeding part.

Laudanum.—This must be given with *extreme* caution. It should only be given to children under medical advice. In adults, it is useful for the relief of such pain as colic, when it may be given either with a dose of

castor-oil, or with 15 drops of spirit of chloroform in water. The dose of laudanum for an adult is up to 20 drops, and the dose of spirit of chloroform may be increased to same amount.

Lime-Water.—This is a useful preparation to give children with their milk, when they are suffering from acidity or diarrhoea. A tablespoonful may be mixed with a wineglassful of milk. In cases of vomiting in adults it is also most useful mixed with milk.

Linseed.—Linseed is largely employed in the making of poultices for application to inflamed surfaces, 4 oz. linseed meal being gradually mixed with $\frac{1}{2}$ pint of boiling water, $\frac{1}{2}$ oz. olive oil being then added, the whole being constantly stirred. Linseed tea or infusion of linseed is a popular domestic remedy for cough and sore throat. It is made by steeping $\frac{1}{2}$ oz. linseed in a pint of boiling water, adding a little sugar and some aromatic substance such as mint or lemon peel.

Magnesia.—This may be given in doses of 20 or 30 grains, in a little milk or water, to an adult, or 5 to 12 grains to those under 12 years. It is very useful in acidity of the stomach.

Mustard.—A tablespoonful in a tumbler of tepid water is a useful emetic. Applied as a poultice or leaf to the chest, it is useful in bronchial colds.

Oil of Eucalyptus.—Derived from the Australian Blue Gum tree. It is a valuable disinfectant and deodorant, rivals quinine as a remedy for malarial fever, and as a sedative to the bronchial tubes is unrivalled. It may be taken internally on sugar, 3 to 5 drops occasionally for cough ; it may be inhaled for bronchitis, or laryngitis, 10 drops in a jug of boiling water and the steam to be inhaled ; it may be rubbed into the skin as a disinfectant in scarlet fever and other infectious diseases, made into an ointment with vaseline as a base ; and it may be sprinkled lightly about a room as a deodorant.

Potassium Permanganate.—This is a soluble substance particularly convenient of application and remarkably certain and efficient in its effects as a disinfectant and deodorizer. Its employment is limited mainly to local applications and to general effect upon the atmosphere

of contaminated apartments by means of evaporating cloths saturated with a strong solution of the permanganate.

Pills.—The following will be found to be useful recipes for pills for general family use:—

1. **APERIENT PILLS, MILD.**—Take of compound extract of colocynth, half a drachm; compound rhubarb pill mass, a scruple; Castile soap, ten grains; oil of juniper, five drops. Beat them into a mass and divide them into twelve pills. These are excellent aperient pills for occasional use in costiveness, bilious affections and on all ordinary occasions. One pill taken at bed-time is generally sufficient, but some persons may require two.

2. **PURGATIVE PILLS.**—Take of compound extract of colocynth, compound rhubarb pill mass, of each, half a drachm; calomel, twelve grains; oil of carraway, five drops; syrup, a sufficient quantity to form the whole into a mass. Divide it into fifteen pills. These are purgative pills of great service in fevers, inflammation and all cases in which such a purgative is needed. Given in doses of two at bed-time, they are pretty certain of procuring free evacuations next day. One pill, or even half a one, generally operates as a very mild yet effectual aperient of much benefit in costiveness.

3. **QUININE PILLS.**—Take of sulphate of quinine, twelve grains; conserve of roses, sufficient to make twelve pills. One to be taken three times a day, before food. Useful in cases of convalescence from fevers, inflammation, etc., when the appetite is capricious.

4. **STRENGTHENING PILLS.**—No. 1.—Take of subcarbonate of iron, a drachm and a half; ipecacuanha in powder, fifteen grains; extract of gentian, half a drachm; socotrine aloes in powder, six or eight grains; simple syrup, or mucilage of gum arabic, a sufficient quantity to form the whole into a mass of proper consistence. Divide it into thirty pills. Two or three to be taken three times a day. Useful as a tonic in indigestion, etc.

5. **STRENGTHENING PILLS, No. 2.**—Take of sulphate of iron, half a drachm; subcarbonate of potash, ten grains;

myrrh, in powder, a drachm; compound powder of aloes, half a drachm; beat them together and divide the mass into thirty pills. These pills are often of the greatest service in green sickness and retention or suppression of the menses, accompanied with a languid pulse; and also in indigestion, general debility, etc. Two may be taken three times a day.

6. **TONIC PILLS.**—Take of dried sulphate of iron, eighteen grains; sulphate of quinine, twelve grains; extract of gentian, thirty grains. Mix. One pill to be taken three times a day. This is an excellent tonic pill and may be given in cases of general debility.

Powders.—The following are recipes for a few powders that can be regarded as being useful and safe for family use:—

APERIENT POWDER.—Take of grey powder, two grains; bicarbonate of potash, fifteen grains; powdered rhubarb, ten grains. Mix. A good aperient powder in cases of biliousness when the tongue is coated with yellow-brown fur.

ASTRINGENT POWDER.—Take of compound powder of ipecacuanha, three grains; compound powder of cinnamon, eight grains. Mix them. This is an astringent powder of great value in looseness and flux. It tends to relax the skin at the same time that it acts as an astringent upon the bowels and is effectually employed to allay pain in stomach complaints. It may be repeated every three or four hours.

POWDER TO ALLAY SICKNESS ARISING FROM IRRITABLE CONDITION OF STOMACH.—Take of sub-nitrate of bismuth, ten grains; bicarbonate of soda, ten to fifteen grains. Mix. To be taken every three hours till the sickness is relieved.

PURGATIVE POWDER.—Take of calomel, two grains; jalap in powder, rhubarb root in powder, of each five grains. Mix. To be taken in any convenient vehicle.

SWEATING POWDER.—Take of compound powder of ipecacuanha (Dover's Powder) twelve grains. To be taken at bed-time in a little gruel and a tea-cupful of warm gruel administered half an hour afterwards. This is a

good remedy in a case of ordinary head cold.

WORM POWDER.—Take of santolin one half to three grains for a child according to age. To be given in the morning in a little milk on an empty stomach and a dose of castor oil administered three or four hours afterwards.

The doses of the medicines contained in the preceding prescriptions are those proper for adults, unless when otherwise stated, and in proportioning the dose to the age of a child, it may be generally assumed that a patient of fourteen years of age will require about one-half the quantity proper for an adult; seven years old, one-third; three years, one sixth; one year, one-twelfth.

Quinine.—This is an excellent tonic in cases of debility, and may be given in doses of 1 or 2 grains 3 times a day, dissolved in a little steel-drops or made into pills. It is useful in the same or larger doses in neuralgia, and the combination with steel-drops will materially assist. In ague, given in large doses—8 or 10 grains—it is most useful. (It is also prepared in a more palatable form as *Quinine Wine*—quinine and orange wine. *Dose*: for an adult, as a tonic, 2 tablespoonfuls 3 times a day.)

Rhubarb.—This may be kept in powders in a stoppered bottle, each containing from 10 to 15 grains. One powder given with the same quantity of magnesia in a little water will act as a mild purgative in the case of an adult. It is useful in dyspepsia.

Seidlitz Powders.—Seidlitz powders are usually put up in two papers, the blue paper containing 2 drachms of tartarated soda or Rochelle salt with 40 grains of carbonate of soda, and the white paper containing 37 grains tartaric acid. The contents of the blue paper is dissolved in half a tumbler of cold water, and the contents of the white paper should then be stirred in, and the mixture drunk whilst effervescing. It promotes the action of the kidneys and liver and acts as a purgative. It is specially useful in cases of gout and rheumatism.

Spirits of Camphor.—Most useful in the case of a bad cold in the head.

When first contracted 5 to 8 drops on a lump of sugar 2 or 3 times a day will give great relief and check the course of the cold; and the nasal congestion will be lessened by frequently inhaling the fumes through the nose.

Spirit of Sal-Volatile.—This is useful as a stimulant in fainting, hysteria, flatulent colic, and after a bite from a venomous animal. *Dose*: 1 teaspoonful in water, for an adult, which may be repeated in 2 or 3 hours.

Steel-Drops.—This is a useful preparation of iron, and may be given with advantage in cases of debility where there is anæmia or poverty of blood. *Dose*: 10 to 15 drops for an adult 3 times a day in water. It should be taken through a glass tube, and the teeth well brushed afterwards, as the iron has a tendency to blacken and destroy the enamel. In cases of erysipelas larger doses are required: 20 drops in 1 teaspoonful of glycerine mixed with water may be taken every 3 hours.

Sweet Spirit of Nitro.—This is useful in cases of fever, and also for kidney troubles. It should be given in doses of 10 to 40 drops, largely diluted with water, every 3 hours.

Vaseline, a petroleum jelly, discovered by Robert A. Chesbrough and introduced in 1871. It is a preparation of the heavier portions of petroleum in a highly concentrated form and greatly refined, all non-essential matter having been removed by careful and exhaustive filtration. It contains no animal or vegetable fats, no chemicals are employed in its manufacture, and it is a mineral product pure and simple. Being tasteless and odourless, it can be taken internally without nausea or other sense of unpleasantness and is of great service for external application, not only in the toilet, but also as a lubricant, emollient and ointment. It has thus a wide sphere of usefulness in the sick-room. Its medicinal preparations are numerous. Pure, it is of value in cough, cold and pulmonary complaint; combined with the concentrated extract of capsicum (*Capsicum Vaseline*) it acts as a counter-irritant without blistering, and can be applied instantaneously; blended

with 3 per cent. of carbolic acid (Carbolated Vaseline), it forms an excellent antiseptic dressing for wounds, cuts, barber's itch, bites and stings of insects; mixed with camphor (Camphorated Vaseline), it is an efficient remedy in rheumatism, gout, gathered breasts and piles; with borax (Borated Vaseline), it is a specific ointment; with menthol (Mentholated Vaseline), it is very serviceable in nervous headache, sore throat, neuralgia, eczema and croup; with oxide of zinc ointment it is healing in eruptions, sores and wounds; Arnicated Vaseline is effective for bruises where the skin is unbroken; Salicylic Vaseline is

used for chilblains and offensive-swelling feet, while Vaseline Camphor Ice is very efficacious in sunburn, chapped hands and irritations of the skin. The medicinal forms of vaseline are put up in collapsible tubes of pure tin and are thus kept sanitary and thoroughly sterilized.

Yellow Oxide of Mercury Ointment.

—This is a valuable ointment in many cases of eczema, inflammation of the eyelids, as well as in various other conditions. It may be made by mixing 8 grains of yellow oxide of mercury with 1 oz. of vaseline.

DISEASES OF INFANCY AND CHILDHOOD

Convulsions.—Some children are much more liable to suffer from convulsions than others, owing to their nervous system being more impressionable.

CAUSES.—Difficulty in teething is a very frequent cause, the irritation of the gums affecting the brain; and when the cause of irritation is removed the convulsions disappear. Indigestible articles of food are another very frequent cause; fright may occasion convulsions, and anything profoundly affecting the mother, such as anger, terror, grief, may so act upon her when nursing as to give rise to convulsions in the infant from indigestion.

SYMPTOMS.—Sometimes the convulsions are partial; thus an arm may twitch or certain portions of the face. The writer recollects being called to a child suffering from partial convulsions, whose mother, recognizing, from the inflamed condition of the gums, that the teething was at fault, took out her penknife and scratched the surface, which was really just what was required. Again, the convulsion may be general, when the muscles of the face, eyes, eyelids and limbs are in a violent state of rapid contraction alternating with relaxation. Froth may appear at the mouth, which, if the tongue has been bitten, will be tinged with blood. The head is generally thrown back, and the thumbs pressed in upon the palms of the hands.

TREATMENT.—If the teeth are plainly at fault, the gums must be

scarified with a piece of lump sugar or lanced with a gum lancet, and 3 grains of bromide of potassium may be given in a little water. If due to some indigestible article of diet, it must be got rid of as soon as possible. A safe emetic is a teaspoonful of ipecacuanha wine in tepid water; drinks of tepid water being afterwards given. This, of course, is only to be given if it is thought that some indigestible article of food has given rise to the convulsions, and if too long a time has not elapsed since it was swallowed. If some hours have elapsed, it will be better to give a teaspoonful of castor-oil. The following mixture will be found useful, and may be given to children from 1 to 3 years old: bromide of potassium, 2 drachms; iodide of potassium, half a drachm; syrup of orange peel, 1 ounce; water to make 4 ounces. A teaspoonful every 3 hours, till all tendency to twitching of the muscles has passed away. Another very useful item of treatment is a warm bath or a pack. A sheet should be wrung out of hot water and wrapped round the child from the neck downwards, and over this one or two blankets. The child should remain in this for 1 hour, after which time it may be taken out and dried with warm towels. Or the child may be immersed in a warm bath up to the neck, or put in a hip-bath with as much water as can be got into it, so as to cover as much of the body as possible. A tablespoonful of mustard added to the water will, by acting as a

counter irritant, increase the efficacy of the bath. It should remain in this for about fifteen minutes, during which cold cloths may be applied to the head, and then be put to bed.

Croup.—Croup means obstruction to inspiration associated with noisy breathing. It is a very common symptom of diphtheria when it has invaded the larynx; in fact, this disease was formerly known as membranous croup. Medical assistance should be summoned without delay. Croup is, however, very frequently the result of simple congestion of the larynx, or of merely spasmodic contraction; in which cases it is of far less serious import than when diphtheria is the cause.

SYMPTOMS.—Croup is attended by very noisy inspiration, on account of the narrowed condition of the glottis preventing the free entrance of air into the lungs. The child feels as if it were about to be choked, and makes violent efforts with the muscles of the chest to increase the supply of air within.

TREATMENT.—Croup is a condition in which no delay should take place in treatment, as imminent danger may ensue from suffocation. Give the child a hot bath at once, then put it to bed between hot blankets. Wring sponges out of hot water, and apply them constantly to the throat. A bronchitis or other kettle should be kept boiling in the room, as the steam from this often has a very beneficial effect on the dyspnoea, or breathing trouble. Vomiting should be induced by doses of ipecacuanha wine as prescribed in "What to do in Case of Accident." After an attack care should be taken not to expose the child to draughts; flannel should be worn next to the skin, and the feet kept warm and dry.

Diarrhoea.—The causes of diarrhoea in children being very varied, it is necessary, as far as possible, to determine what it is in each case; thus, for instance, *teething* is a very frequent cause when it is difficult and accompanied by a good deal of irritation. When the tooth is cut, the irritation ceases, and the diarrhoea passes away. Again, *cold* may give rise to diarrhoea, from the impression made upon the nerves of the skin. This is frequently

seen in children who toss the bed-clothes off during sleep. *Fright* may also give rise to diarrhoea, and of course the eating of *indigestible articles of food* will do the same. A frequent cause of diarrhoea in infants is an overloaded condition of the stomach, or the giving of unsuitable articles of diet.

TREATMENT.—Diarrhoea in children ought never to be neglected, as, if allowed to run on from day to day, it weakens the child, and may pass into inflammation of the bowels, a much more serious disorder. If the diet appear to be at fault, it must be corrected. Suppose, for instance, that the child, previous to the cutting of the teeth, has been given solid food; the probability is that this has disagreed and set up irritation in the bowels, causing the diarrhoea. In such a case nothing but milk should be given for food, to which a little lime-water may be added with advantage, and a dose of castor-oil administered.

If the diarrhoea has continued for any length of time it is necessary to check it at once. For this purpose a little chalk mixture may be given—half to 1 teaspoonful every 4 hours to a child two or three years old. This may be combined with a little opium, as follows: laudanum, 4 drops; tincture of catechu, 2 drachms; chalk mixture to make 2 ounces; 1 teaspoonful to be given every 4 hours.

Diphtheria.—This disease is characterized by sore throat and fever, which begins insidiously, and by enlargement and tenderness of the glands under the angle of the jaw. Examination of the throat will show the uvula red and swollen, and the tonsils much inflamed, with greyish patches of membrane on them. There may be croupous breathing, from the larynx being involved in the disease. Medical assistance must be called in immediately, as the recovery or death of the patient may be determined by the quickness with which treatment is applied.

TREATMENT consists in the injection of an antitoxin serum, painting of the throat with an antiseptic—lactic acid 1 part to 7 of water is a good application—and suitable stimulating medicines.

In view of the infectiousness of the disease, the patient must be isolated, a

carbolized sheet being hung over the room door ; a carbolic spray should be frequently used about the room, and the attendants must be careful not to inhale the patient's breath. As a precautionary measure, they may use an antiseptic gargle or mouthwash themselves, remembering that being careful does not mean being cowardly. A steam kettle is useful, in keeping the atmosphere of the room moist and warm.

German Measles.—German measles, rotheln, or rubella is an epidemic fever with a rash bearing resemblance to that of scarlet fever and that of measles. It is however distinct from each, though it is not always easy to diagnose it in the earlier stages. It principally attacks children, though its occurrence among adults is by no means infrequent. As a rule the symptoms are much milder than those of either of the two diseases which it somewhat resembles. It commences with a sensation of chilliness, headache, nasal catarrh, and general malaise. There is a slight rise of temperature. The rash appears either on the first or second day, first on the face, then on the chest, and in the course of twenty-four hours spreads over all the body. The eruption consists of a number of pink spots, slightly raised above the general surface. It generally remains for two or three days, after which it gradually fades, and may be followed by a little peeling of the skin. The treatment of German measles is very simple, and merely consists in keeping the child in bed for a few days, and giving a diet composed largely of milk.

Emergency Cases.—(1) If the child be suddenly attacked with vomiting, purging and prostration, send for a doctor at once. In the meantime put the child for a few minutes in a hot bath, then carefully wipe it dry with a warm towel and wrap it in warm blankets. If its hands and feet are cold, bottles filled with hot water and wrapped in flannel should be laid against them.

(2) A poultice of Indian meal, or one made of flax-seed meal to which one quarter part of mustard flour has been added, or flannels wrung out of hot vinegar and water should be placed over the belly.

(3) Five drops of sal-volatile in a teaspoonful of water may be given every ten or fifteen minutes.

(4) If diarrhoea has just begun, or if it is caused by improper food, a teaspoonful of castor-oil, or of the spiced syrup of rhubarb, should be given.

(5) If the child has been fed partly on the breast and partly on other food, the mother's milk alone must now be used. If the child has been weaned, it should have its milk-food diluted with lime-water, or should have weak beef-tea or chicken-water.

(6) The child should be allowed to drink cold water freely.

(7) The soiled diapers or the discharges should be at once removed from the room, but saved for the physician to examine at his visit.

Measles.—This is an infectious febrile disorder. It is nearly always more or less prevalent in this country ; but at times it spreads with great rapidity, and sometimes causes death. As a rule, children and young people are attacked; but the general exemption of adults is probably due only to the fact that most of them have had the disease in childhood. Second attacks are not unknown.

SYMPTOMS.—Before the appearance of the rash there are some precursory symptoms ; the patient feels languid and hot, there is shivering, followed by a rise of temperature, a quick pulse, thirst, loss of appetite, and sickness. The eyes become red and watery, and give the patient the appearance of having cried ; the membrane which lines the nose, throat, larynx and trachea is red and swollen, and pours forth a watery secretion ; thus the affected person appears to have a severe cold, with running from the eyes and nose. There is generally much sneezing with a slightly sore throat and a dry, harsh cough. Convulsions occasionally occur in children. After these symptoms have lasted 3 or 4 days the rash appears. It begins in very small papules or minute red pimples, which rapidly multiply, and these run together into patches which have a tendency to a horse-shoe, or crescent, shape, while the portions of skin between are of a natural colour. Commencing on the face and neck, the blotches spread to

the arms, then the trunk of the body, and gradually reach the lower extremities. When the eruption has disappeared the part of the skin affected is covered with a dry scurf.

COMPLICATIONS are liable to occur. Convulsions at the commencement are usually without danger; if they come on at the end of the disease they may lead to a fatal issue. Inflammation of the lungs and bronchitis, which may prove fatal to young children, may ensue if the patient is allowed to take a chill. The eruptions turning of a dark purple colour is a symptom of danger.

TREATMENT.—The child must be kept in bed. The room should be airy and well ventilated, but the patient must not be exposed to draughts. All discharges should be removed at once, and dirty linen taken away and disinfected. A fire should be kept burning, and the temperature of the room maintained about 60° or 65° F. The blinds should be kept down on account of the patient's eyes, and the bed should be turned so that he lies with his back to the light. In all cases it is advisable to give the patient a hot bath at the very onset of the disease; then dry the surface of the body, and put to bed directly. All sources of annoyance and irritation and all noises should be avoided. The food should be of the simplest nature: milk, milk and water, chicken broth, beef-tea, and toast and water. When the fever subsides a small piece of chicken or fried sole may be eaten, with toast or bread and butter; a fresh egg may also be given. As the tongue cleans and the appetite returns, the patient may be allowed to resume his ordinary diet. Although children generally recover rapidly, yet there are times when much debility ensues, and the general health becomes impaired although the fever has quite left. Children who are in bad health are liable to lumps or glandular swellings of the neck and under the jaws, or they may remain weak for a long time. In these cases chemical food may be used with advantage; Parrish's Syrup is another name for this. It may be given in doses of 5 to 10 drops 3 times a day in a little water, to children 2 or 3 years old. Fellow's Syrup of the Hypophosphites is a very useful preparation in such

cases, and may be given in doses of 5 drops largely diluted with water, 3 times a day, immediately after food. The following mixture is useful: steel drops, 1 drachm; solution of chloride of calcium, 3 drachms; glycerine, half an ounce; add water to 4 ounces. 1 teaspoonful for a child from 3 to 5 years old in water 3 times a day. A visit to the seaside is very beneficial.

Mumps.—This is a very infectious febrile disease, accompanied by swelling of the parotid salivary gland in front of and beneath the ears. The patient complains of slight malaise for a day or two, and then the swelling appears, at first on one side, generally commencing beneath the ear, and coming forwards on to the cheek, followed in a day or so by a similar swelling on the other side of the face. Sometimes both the swellings appear simultaneously; sometimes only one side is affected. The swelling is usually painful, especially during deglutition.

TREATMENT.—If there is much pain, hot fomentations with poppy heads should be applied, but if not it will be sufficient simply to keep the head tied up in flannel. Very occasionally an abscess may form on one side or other. This will require energetic medical treatment. Usually no medicine will be required, except a simple aperient at the commencement of the attack, and during convalescence the following prescription: tincture of steel, 1 drachm; glycerine, 4 drachms; water to 6 ozs.: give 1 tablespoonful 3 times a day for a child of ten. While there is fever the patient should be kept in bed; and cold must be avoided throughout the course of the disease.

Night Terrors.—The attacks known as Night Terrors are most common in children between the ages of three and eight years, but there are cases in which the attack has been noticed at as early an age as eleven months. In its general symptoms the seizure resembles a very severe nightmare: the child wakes screaming, and is either found sitting up in bed crouched in a corner of the bedroom, or he will rush out of the bedroom and fly to the nearest person. His face is set and terror-stricken, and his eyes staring, and he often cries that he sees frightful

apparitions, which follow or threaten him. In bad cases the child cannot recognize even the most familiar faces, and clings blindly to the first comer, but after an interval varying from a few minutes to half an hour he begins to recognize his surroundings, and to notice people that he knows. He shows all the signs of extreme exhaustion, and his face and body are wet with sweat. When he at last falls asleep again it is to start and mutter, and he will beg not to be left alone. Frequently a large quantity of urine is passed either during or just after the attack. A curious thing about the attacks is that they occur while the child is in perfect health, a fact which differentiates it from nightmare, which is generally associated with ill-health and digestive disturbance. In the case of Night Terrors there is generally a family history of hysteria, chorea, or epilepsy, though this is not invariable. It is as well before attributing the attack to brain disturbance, to try the effect of a dose of calomel, as constipation seems frequently to be the cause of slight attacks. Care should be taken that the child is not left to sleep in the dark or alone, for as Dr. West points out, a light burning brightly in the room and a familiar face meeting the child's eye at once on waking will do much towards breaking the spell and allaying its fears. Harshness in such cases is quite clearly out of place, and few pieces of cruelty can be greater than forcing a little timid child, in whom threatenings of these attacks have occurred, to go to bed in the dark, or to lie there without a light.

Rickets.—This generally makes its first appearance between the ages of 6 months and 2 years. The causes are unsuitable food and unhealthy conditions of life, while hereditary influences may have some effect in producing the disease. The early symptoms are restlessness at night, and free perspiration in the head while sleeping. These are followed by enlargement of the ends of the bones of the arms and legs at the wrists, knees and ankles. The head also enlarges, and the fontanelles do not close, the forehead becoming square and prominent. The long bones soften and bend, the limbs becoming crooked,

and the chest "pigeon breasted." The health becomes poor, the patient showing undue susceptibility to chills, and disorders of the nervous system.

TREATMENT consists primarily in removing the cause of the trouble. Nourishing and digestible food should be given, with a due supply of animal broths, fish and meat, according to the age of the child. The ventilation of the bedroom and day-room should be free, and any sanitary defects remedied. Daily tepid, or still better, if they can be borne, cold baths are advisable. Warm clothing should be worn, and as much open air and sunshine as possible obtained. The tendency to bandy legs must be corrected by splints, and by keeping the child off its legs. The only medicine of use is cod-liver oil, which should be taken in as large doses as can be digested.

Ringworm.—This disease is caused by the growth in the skin of a low form of vegetable life allied to ordinary mould. When some of the scales of a hair affected with ringworm are placed in liquid, and magnified about 300 times, the *spores* or seeds, and the *mycelium* or thread of the fungus, can readily be seen.

RINGWORM OF THE SCALP is sometimes a most intractable disease, especially when it has been existent for some time before its discovery; and its cure will tax the resources of the most experienced doctors to their utmost. Therefore prompt and vigorous treatment is essential. It shows itself as a dry scurfy or scaly condition of some portion of the scalp, generally in separate patches more or less circular, on which the hairs are broken off, and the surface presents a dirty appearance, with some redness beneath.

ON THE FACE, BODY OR LIMBS the disease appears in the form of rings of various sizes, generally pretty round and of a reddish colour; they commence as minute points, and increase in size somewhat rapidly, healing in the centre as the disease progresses centrifugally. As the disease is contagious, children suffering from it must not go to school or play with others till they are cured.

TREATMENT.—The daily application of dilute nitrate of mercury ointment or ammoniated mercury ointment is

generally sufficient to effect a cure. Amongst the popular remedies are ink and vinegar. Strong acetic acid is a useful preparation. It should be used once and well rubbed in; after that ammoniated mercury ointment may be used daily. The liniment of iodine is also a most useful preparation. It should be applied by means of a camel-hair brush or feather, and repeated in a few days if necessary. Great cleanliness is essential in this affection, and if the disease is situated on the scalp, the hair must be cut away for some little distance round the diseased patch before applying the remedy.

Teething.—The period of teething is one which is looked upon by many mothers with dread. Owing to the greater irritability of the system usually found to exist at that time, children are more susceptible to certain diseases; and in order that everything may be done on the mother's part to guard against these, it is well that she should be familiar with the usual time of appearance of the teeth, and with a few hints that may be of service in maintaining the health of the child during this period.

The first, or temporary, teeth, 20 in all, generally begin to make their appearance between the fifth and eighth months in the following order: the 2 central front teeth of the lower jaw, called central incisors; the corresponding teeth in the upper jaw; 2 lower and 2 upper lateral incisors; the 4 first molars; the 4 canines (the 2 upper of which are popularly called *eye-teeth*); and, lastly, the 4 second molars.

The symptoms of troublesome teething are most perceptible to the mother; the child sucks feebly, and its gums are hot, inflamed and swollen. In this case, relief is yielded by rubbing the gums with the finger or a teething ring from time to time. Selfish and thoughtless nurses, and mothers too sometimes, give cordials and sleeping-draughts, the effects of which are too well known.

During the cutting of the temporary teeth, the infant's head should be kept cool, and its feet and hands warm. The body clothing should be light but warm. The apartments occupied by the child should be kept rather cool at

this time. If the bowels are confined, the diet should be altered, and a little calcinated magnesia given in milk.

Weak and improper food is often the cause of tardy teething. Children should be washed daily, and always kept sweet and clean.

Thrush.—This is a common affection in infants. It may be seen in the mouth as small white specks on the lining membrane. The malady is due to the *Saccharomycetes albicans*, and is often due to mal-nutrition and bad feeding, especially to dirty bottles or teats, and sour milk. The swallowing of food becomes difficult, there is thirst, and the water is scanty and high-coloured.

TREATMENT.—If the infant is bottle-fed, see that everything is scrupulously clean. If breast-fed, a nipple shield should be used, otherwise the nipple will become irritated. Give a little lime-water in the milk, in the proportion of 1 to 4 parts. Paint the mouth frequently with glycerine and borax, or honey and borax, using a feather or small camel-hair brush; or dissolve some powdered borax in water (4 grains borax to 1 ounce of water), and apply in the same way. Should this fail, wipe the mouth out thoroughly with a soft wet rag, and then rub some flowers of sulphur on the white patches with the finger. Great attention must be paid to the diet, and any errors must at once be corrected. If the stomach is disordered and the motions offensive, benefit may be derived by giving the child one of the following powders twice a day: grey powder, 6 grains; bicarbonate of soda, 18 grains; powdered rhubarb, 8 grains. Mix and divide into 6 powders; 1 twice a day to a child a year old. Change of air when the child is getting better will often work wonders.

Whooping-Cough.—This is an infectious disease of great frequency in childhood, and a large proportion of infant mortality is due to this cause.

SYMPTOMS.—The earliest symptom is a common cold or catarrh, accompanied by a cough; there is also a slight amount of fever, restlessness, and sometimes running at the eyes and nose. The cough in a few days becomes most troublesome; in a week or

10 days, but often later, the child will begin to have the characteristic whoop; the cough comes on in paroxysms, more frequently by night than by day; each paroxysm begins with a deep and loud inspiration, followed by a succession of short and sharp expirations, again followed by a deep inspiration, and the repeated expirations; this may go on several times, and last 1 or 2 minutes, according to the severity of the case. Just before each attack comes on, the child clings to its nurse or mother. During the paroxysm it sits in an erect position, the face is flushed, the veins in the head and face prominent, the eyes suffused and watery, and generally there is some glairy fluid expelled from the mouth, for vomiting may come on. After the paroxysm the child will rest for a time, and appear pretty well until the next attack. These symptoms last for 3 or 4 weeks, and then the cough abates in severity and frequency, and finally ceases altogether. If it comes on during the winter the cough may last six or seven weeks, unless extra care is taken. In most cases there is some bronchitis attending this complaint, shown by the hurried breathing and rise of temperature, and by the rattling noises over the chest.

TREATMENT.—In all cases it is best for the child to be kept in the house as soon as the malady has declared itself; in a very mild case it need not be kept in bed, but it should be in a room of warm and even temperature, and protected from draught; it can then be allowed to play about as it likes. If there is any lung affection, it must be put to bed and treated according to the requirements of the case. Other children must not be allowed to come near it, unless they have had an attack previously, in order that its spreading may be prevented. The child must be fed in the usual way, but solid food

should be given sparingly, and the stomach must not be over-loaded, as vomiting is often a symptom. Steel wine is very valuable in cases of whooping-cough, and more especially when there is no fever and during convalescence; it may also stop the diarrhoea, which is now and then present. Numberless remedies have been tried for whooping-cough, but as many of them are powerful and require careful watching, they ought only to be given under medical direction. Some sweet mucilaginous fluid may be given, such as the mucilage of gum acacia mixed with glycerine, in the proportion of 1 teaspoonful of the latter to 1 tablespoonful of the former; a teaspoonful of this being given to a child 3 or 4 years old 3 or 4 times a day. A cresolene lamp has often a good effect, or a little pure carbolic acid may be put in a saucer over a nightlight. Warm clothing should be worn; and during convalescence a nourishing diet, moderate exercise in the open air when fine, a tepid bath in the morning, and a tonic, such as steel wine or cod-liver oil, are enjoined. A visit to the seaside, seven weeks from the onset, will frequently complete a cure.

Worms.—Those principally affecting children are of two kinds—the small threadworms, usually seen in large numbers, and causing great irritation, and the larger round worm, generally seen singly, and which is of about the same size and shape as the common earthworm.

Worms are the torment of some children; the symptoms are an unnatural craving for food, even after a full meal; costiveness, suddenly followed by looseness; fetid breath, a livid circle under the eyes, enlarged abdomen, and picking the nose; for which the remedies must be prescribed by the doctor, but sugar, preserves and green vegetables must be avoided in the diet.

DRAWING AND PAINTING

DRAWING

This chapter necessarily deals only with the rudiments of the art of drawing and painting, as the character and direction of the more advanced training will be dependent on the particular branch of art work which it is proposed to follow. Moreover, advanced drawing would require special instruction, whereas the first steps in the art may, to a certain extent, be directed and practised in the home.

It is naturally of great importance that a training in drawing should proceed from the very beginning, on the right lines, as much time and labour will then be saved, and the acquiring of mistaken ideas and faulty methods rendered an impossibility. In the initial stages of instruction in drawing it is easy enough to keep to the right lines, as the methods of procedure are more or less of a limited nature. Nevertheless, it is of considerable importance that the student should grasp the object of a special line of study and the reasons why a particular task be given him.

In the first place, the immediate object of drawing will be the training of the eye to a right sense of proportions; for unless the fundamental proportions of a drawing be correct, and unless care be taken to obtain absolute accuracy in the structural lines upon which a drawing is built up, all detail and finish which may be embodied in the drawing, however beautifully expressed, will not be of the least practical or other use. Therefore it is of primary importance that the student of drawings should be induced to study and labour to obtain accuracy of proportion in the fundamental lines of his drawing before being allowed to proceed to the more attractive work of filling-in detail. To the youthful mind, impatient of processes and

anxious to get to the interesting parts of the work, the preliminary grounding in structural accuracy may appear to be a somewhat tedious task, and the student should not be allowed to work too long at one subject. When the mind begins to weary of the work on hand, a fresh subject should be substituted.

But the main point which must be impressed is that the proportions be accurate before the drawing is proceeded with.

The orthodox method of instruction in elementary drawing begins with an exercise in what is called "Freehand." This consists in the copying of a printed design or symmetrical pattern. The object of this is, as its name implies, to develop freedom of hand in drawing, but at the same time it, to a certain extent, develops the sense of proportion. It also increases the power of observing the exact nature and peculiarities of an object, as when copying the design given, close study of its characteristics is essential.

It also furthers the power of repeating a line or curve in a reverse manner, which will certainly be found useful in later drawing from models.

In drawing from a Freehand design the left-hand side will be copied first, and, the design being a symmetrical one, the right hand half of the drawing will be a reversed version of the left. The practice of freehand, although beneficial to a certain extent, will not be found to be the most helpful method of procedure, for the reason that proportion will be grasped more readily and in a greater degree by drawing from an actual object such as a simply-formed vase. Moreover, it is not of great importance to possess freedom of hand in the early stages of draughtsmanship, and as a matter of fact, such freedom will come of itself—

the inevitable result of much practice; whilst to make it a primary object of drawing for a beginner, is to start at the wrong end.

The best way to commence a training in drawing is to set before the student some simple, symmetrical object such as a vase, or some other plain object—a cup, for example.

The method of procedure consists in drawing or ruling a straight line on the paper to represent an imaginary line running through the centre of the object to be drawn. Then the measurement of the width of the object must be compared with its longest measurement, and these comparative dimensions will then be indicated on the paper. On the drawn line the extremities must be marked representing the length of the object—the space which the drawing of the object will occupy on the paper.

Careful note must then be made of the outline of the object, its curve being followed through all its movements, where it is concave, and where it becomes convex. These points may be indicated on the paper, and the line of the contour of the object imitated as accurately as possible, the left-hand side being drawn first.

Naturally several attempts will be made before the drawing begins to resemble the model, but practice and perseverance will quickly train both eye and hand.

In the beginning, measurement may be resorted to in order to ensure accuracy, but only in the initial stages, as the student must be trained to rely to some extent on his eyesight, although accuracy in a student's work is of more value than freedom.

It may be said here that from the very commencement care should be taken to fill the paper on which the drawing is to be made, for example, a drawing must not be squeezed into the corner of a sheet of paper, but should be well placed in the centre; and consequently the paper must not be too large, as the drawing should adequately fill it without being, itself, absurdly big. In no case should the drawing be larger than the natural size of the model.

This adequate and proper filling

of the paper—the pleasing disposition of a design in a given area—is the first step in the art or science of composition.

The drawings from simple objects or models will at first be executed in simple outline, but as the student becomes proficient in this method, he may turn his attention to light and shade and the space enclosed by the drawn outline may be filled with shading, that is, the imitation of the relative light and shade on the surface of the object by means of a blacklead pencil or a stump. But before this branch is touched upon the drawing in outline may become more complex. Thus two vases of slightly different character may be placed side by side, or two or more different objects may be grouped together; so, [where a cup alone has been drawn, a cup, saucer and spoon may now be attempted. It is advisable that the student be thoroughly at home with drawing in outline before he proceeds to drawing in light and shade; for it is of paramount importance that progress in drawing should not be forced, and the passing from the simple to the complex permitted before the simple or preparatory stages have been thoroughly mastered, otherwise a structure will have been erected, as it were, on an insecure foundation; much time will have been wasted and the progress of the student will be impeded by a want of complete efficiency, and considerable difficulty will be experienced in more advanced stages which the student will reach before he is properly qualified to do so.

In rendering the light and shade of an object it is best to start from the darkest parts and work up to the high lights, which will be expressed by the white paper being left untouched. Each of the tones or degrees of darkness on the object possess a certain more or less definite shape. These shapes are often very subtle and not readily traceable. Nevertheless, efforts should be made to search out the shapes of these tones, which must be faintly indicated on the drawing and the spaces thus obtained, which correspond with the varying qualities of light and shade in the object, may be filled

in, more or less strongly, as the case may be, by means of a lead pencil.

At the beginning the treatment of the light and shade should be a broad one, without attempt at subtlety. The tones should be kept definite, like the planes or facets of a diamond, for example. These can be readily softened down and united afterwards. Without a definite foundation of these planes, the effect obtained is soft, formless and woolly.

As the student advances in this branch, great delicacy, subtlety and beauty can be obtained in the drawing. In the advanced stages it will probably be found a convenience to use a stump and stumping chalk, which can be bought at any art stores. But in the earlier stages it will be safer to stick to a lead pencil, which is capable of more definition, and will more readily resist the temptation to produce too soft work.

Work with a stump is capable of giving great delicacy and softness. These qualities, though extremely pleasing to the eye, are only tolerable when applied to a good solid foundation of correct drawing. They should never be allowed to form the aim of elementary drawing. In the beginning, care must be taken that the light and shade be of a simple nature. To ensure this, the work should only be attempted in a room which is lighted from one end and from one window; otherwise a number of false lights and reflections are cast on the model and the difficulties are much increased. As the student advances, the models may be made more complicated and so more interesting. Still life groups, which may present very interesting problems, may be undertaken; and even interiors, whole portions of rooms, pleasantly arranged, can be attempted.

When drawing in light and shade has been mastered, the student may proceed to draw from the cast. And this will be a definite advance to a distinctly higher branch of the subject, but one which can, nevertheless, be easily practised at home.

A cast of a head may be bought for a small sum, and this will afford lasting interest to the student, for it may be drawn in innumerable positions and

under varying conditions of light and shade.

Moreover, other interests will enter in, such as expression, and a certain amount of human interest.

Casts of many of the finest masterpieces of antique and some modern sculpture—heads, hands, feet, and whole figures—may be bought for moderate prices. In drawing a cast of a head the student will have a task which will demand the exercise of all his knowledge and previous training—proportion, drawing in outline, modelling in light and shade. The first step, as usual, is to make a preliminary structure of accurate proportion. A line will be drawn on the paper representing a supposed line running through the centre of the head.

On this line marks will be made to indicate the extreme points of the top of the head and the point of the chin.

Points representing the extremities of the sides of the head will be calculated in proportion to the length.

Having thus obtained the proportions and position of the head, the next step is to discover where the lines of the eyes, the nose and the mouth cut the central line of the drawing.

This is merely a matter of careful measurement. Now the contour of the head may be drawn in simple big curves, the subtle characteristics of which may afterwards be added. Then the features may be drawn in outline, due regard being paid to their proportion, as compared to the whole mass of the head and to one another. Care also must be paid to getting their position and direction accurately.

The next proceeding is the mapping out of the broad masses of light and shade. These must be treated broadly, to start with—the broader the better. Subtlety and finish may be added later, to any extent. The masses of shade may be filled up with pencil or stumping chalk.

Special attention must be paid to particular accents, such as unusually dark parts and straight or definite lines, the preservation of which will give strength, definition and expression whilst they prevent undue softness, shapelessness or woolliness. Having got the main things correctly, the work

may, if desired, be worked up to a high state of finish, but it must be borne in mind that the important points in the drawing are the accuracy of the proportion of the whole and of the parts, and the careful drawing of the features.

These are the fundamental qualities not only of the drawing, but of the model, whereas finish as regards light and shade is an ephemeral thing which varies with every change of position and every alteration of the light.

Another practice, which will be found very beneficial, and which is too often neglected, is drawing from memory. This should be cultivated from the very earliest stages, and the student will quickly begin to practise it, as a matter of course. When the actual drawing of an object has been completed, the same drawing should be repeated entirely from memory and without reference to the model. The result may then be compared with the original drawing, when it will become evident which points have chiefly impressed themselves on the memory and in what direction the draughtsman's hand is weak.

Drawing from memory will have the effect of stamping the essential principles of drawing on the mind, whilst it will, at the same time, train the eye to rapidly perceive the salient features of an object.

The branch of drawing dealing with design has a very wide sphere for its exercise and practical application.

The power of producing good effective and artistic designs will prove a valued asset in the practice of every art and craft, and also in the pursuit of many trades and professions where a demand for it may not be readily suspected.

Design in its elementary stages may be conveniently studied at home, though it cannot be followed at all, without a sufficient previous knowledge of drawing. To begin with, the best plan will be to draw from a cast of a design.

Casts of designs, in bas-relief, many of them by famous masters, can be readily obtained. The cast should be carefully copied, both in line and in

light and shade, but more especially the former.

The cast should be copied several times, until something of the principles on which its design is built up has been grasped by the student.

The perceptive mind will soon acquire a knowledge of how the masses have been disposed to give a proper sense of balance, of how the whole design is based on a main curve or line.

Almost all designs are composed of flowers, leaves and other objects found in Nature. These are expressed in a conventionalized form. And this conventionalization of form is expressed by each artist in his own way, and therein lies its possible beauty of originality, its ingenuity or quaintness. Consequently, an extensive knowledge of the structure of flowers, leaves and whole plants forms the stock-in-trade of the designer; and, therefore, flowers and casts of flowers, etc., should be drawn as often as possible.

A drawing made from Nature may then be rendered in a conventional form. That is to say, the main lines or curves forming the flower should be drawn boldly and the smaller subsidiary curves made to fit in with one another in such a manner as to give balance while the whole drawing proceeds in a fluent fashion. A certain amount of license is permissible, but the conventional drawings should possess some of the fundamental characteristics of the original, thus a conventional drawing of a rose should unmistakably owe its inspiration to a rose.

Then other drawn designs may be studied and copied with the object of obtaining an understanding of the principles on which they have been worked.

In the various museums, an inexhaustible variety of designs may be studied, and in fact, practically everything in nature provides material for a design.

The still more advanced stages of the art, and such particular branches of it as geometry, perspective, drawing from the life, advanced design and the art of black and white for illustrative work can be most conveniently studied at one of the numerous art schools.

But there is one practice which can be pursued at all times, and that is the close and intelligent observation of the works both of art and Nature.

PAINTING

Elementary painting is the imitation, in colour, on a flat surface, of objects or groups of objects seen in Nature.

There are various methods by which painting can be executed, of which the most important are oil-colour and water-colour.

Work in black and white, if rendered in wash or body-colour, becomes a branch of painting.

The following are some simple directions which will enable the student to study the initial stages of the art of painting.

Oil-Colours consist of pigments finely ground in a vehicle of oil or varnish. They are used on canvas, on wooden panels, and on mill-board, and are applied by means of hog-hair brushes. Sable brushes are sometimes used for softening, and the rendering of delicate details, but they are expensive and their use is limited and by no means indispensable.

There are various mediums in use, many of them of dubious reliability, and the student will do well to keep to pure poppy oil. The student should proceed as far as possible without the use of medium. Turpentine is of use for thinning the colour for laying-in the ground-work of the painting.

There are many colours which are lacking in permanency, and should be avoided.

A simple, safe and adequate palette for general work is the following:—Flake white, lemon yellow (deep), yellow ochre, raw Sienna, Venetian red, Chinese vermilion, rose madder, cobalt blue, French blue, viridian, raw umber and ivory black.

The fewer colours that are used the better.

The student should realize that painting is essentially a process, that it goes through a number of stages before reaching completion, and consequently he must not attempt to get his work exactly like the model at one sitting.

Let us suppose that the student

commences with a simple still-life study, say a blue vase with a brown background.

He will draw the vase carefully in charcoal on his canvas.

Then the background will be covered in, as nearly as possible the same colour as the background, plenty of paint being used.

Then the vase will be painted in the same way.

In this first painting the colour should be exaggerated somewhat, and made stronger than in Nature.

When this painting is dry, in a day or two, it can be carried a step further. The background will be repainted a little nearer to the actual background, the necessary alterations in colour being made, and the same thing with the vase. Paint the strongest and darkest parts first and work up to the high-lights. Roughly speaking, the lighter tones will be obtained by mixing white with the blue.

At first the colour will be crude, but as the student progresses, he will learn how to modify his colours by mixing with others until he is able to get the particular quality of colour required.

This is a matter of experience and experiment.

Edges provide one of the most difficult problems in painting—a problem which is usually only solved after a great deal of experience. In the painting where the vase and background meet, the student will find that he has got a hard line or edge which must be got rid of without losing the form of the vase.

As progress is made, the student will learn to soften this edge *not* by smearing it into the background, but by judiciously painting some of the background colour into the edges of the vase and *vice versa*.

The aim of the beginner in painting is to learn how to use his tools and not to produce pictures.

It is a great thing to be bold and to remember that all mistakes can be easily altered.

The mixing of colours is a matter of considerable importance. There are a few obvious combinations of colours which are useful, for example: blue and yellow make green. The use of

different blues with different yellows naturally produce different greens ; thus a mixture of cobalt and lemon yellow gives a bright green, whilst the same blue mixed with yellow ochre gives a greyer and duller green. The substitution of French blue or another blue for cobalt produces still different qualities of green, and so on.

Purple is obtained by the mixing of blue and red. Purple occurs in several varieties, as blue-purple, red-purple, grey-purple. Proceeding on the same principles as for the mixing of green tones, cobalt mixed with rose madder gives a rich purple which varies in character according to the proportion of blue to red. Cobalt mixed with vermilion or with Venetian red produces a greyer purple.

All these tones can be made lighter by the addition of flake white.

Orange results from mixing red and yellow. Proceed as before, using different reds and different yellows and in varying proportions until the right quality of colour is obtained.

Grey tones are obtained by the mixing of three opposing colours with white, or by mixing black and white.

The following is a useful table :—

TINTS, TO OBTAIN

Mixing Black and Red gives Brown.
 Mixing Blue and Yellow gives Green.
 Mixing Brown and White gives Chestnut.
 Mixing White, Yellow and a little Venetian Red gives Buff.
 Mixing White, Yellow and Venetian Red gives cream.
 Mixing Umber, Yellow and Venetian Red gives Drab.
 Mixing Yellow and White gives Straw colour.
 Mixing Black, Blue and White gives Pearl Grey.
 Mixing Lamp Black and White gives Lead Colour.
 Mixing Lamp Black and Indigo gives Silver Grey.
 Mixing Green and White gives bright Green.
 Mixing Emerald Green and White gives Brilliant Green.
 Mixing Red, Blue and Black gives Olive.
 Mixing Yellow and Red gives Orange.

Mixing Carmine and White gives Pink.
 Mixing Blue, White and Lake gives Purple.

Mixing Venetian Red and Black gives Chocolate.

Mixing Lake, White and Vermilion gives Flesh colour.

Mixing Blue and Lead colour gives Pearl.

Mixing White and Lake gives Rose colour.

Mixing Purple and White gives French White.

Mixing White and Carmine gives Pink.

Water-Colour differs from oil in that it is a fluid medium. It is not used as a solid body but as a species of liquid stain, the surface of the paper being merely stained or tinted in varying degrees of strength. It is a difficult medium to use, as it is worked in a more or less wet condition, when it has a tiresome habit of running all over the paper. This can be obviated to some extent by keeping the paper flat during work.

Its use in too dry a way results in hard lines and the loss of much of its charm.

White in water-colour should be left severely alone by the student. Its use, except by a master, results in opaque, dirty colour.

The high-lights are obtained by leaving the white of the paper untouched. It is best to work on water-colour boards, which may be obtained at any art-stores.

Make a careful drawing of the model in lead pencil. Then moisten the paper and allow it to dry to a slight extent. The great secret in water-colour painting is to know exactly when the paper is at the right stage of wetness to be worked on, and this will be discovered by practice.

Let the colour flow from the brush on to this moist surface, forming a sort of mosaic or patch-work of colour without hard or definite edges. When this is dry, repeat the process, making the colour stronger and more definite.

Sable brushes should be used, not camel's hair, which are of no use.

The method of mixing colours is the same as for oil, but no white is used, and lightness or depth of colour depends on the amount of water

used—the more water, the lighter or higher the tone.

Black and White work is used chiefly in the illustration of books. It is rendered in various mediums, of which pen and ink, wash and body colour are in most demand.

Pen and Ink is a difficult and arbitrary medium. It consists of drawing with a fine pen on a smooth surface, Bristol board—a specially-prepared card—being generally used.

Great variety of line can be obtained with an ordinary crow-quill pen, from extremely fine delicate lines, to broad black ones.

The differences in tone should be obtained by varying the strength of the line, rather than by cross-hatching, as the former method reproduces better.

The lines must be kept clean and distinct, but the drawing must not look too mechanical.

Cross-hatching is permissible to a limited extent to give variety to a drawing.

Pen and ink should be treated in as simple a way as possible, only the most important features of a subject being drawn.

Practice drawing in pen and ink from Nature, gradually learning to suppress superfluous detail.

Good pen drawings should also be studied, from the simple line-work of Phil May to the more elaborate work of Mr. Abbey, R.A.

Wash is used like water-colour without colour, a process-black, to be obtained of any art-stores, being used instead. Carefulness of drawing, variety of tone (avoiding dense black), finish and lucidity are the points to be observed.

Wash is generally used on Bristol board or smooth paper.

Body-Colour is like wash, but more solidity is given to the material by white being mixed with the black.

There is a special process-white made for reproduction, as Chinese white alters slightly when reproduced. Body colour is used in a more or less dry way with a little water. The mode of procedure somewhat resembles oil-painting.

Difference in tone depends on the proportion of black to white. The high-lights are obtained by use of pure white.

Paint in the dark half-tones first, then the lighter, gradually working up to the high-lights. Then put in your blacks strongly and definitely.

This medium is also used on Bristol board.

QUARANTINE

The following table of quarantine will be useful to parents, as showing how soon after the various infectious diseases a child may return to school.

Disease.	Infection after an attack ceases—	Quarantine required after latest exposure to infection.
Chicken Pox . . .	When every scab has fallen off.	Twenty days.
Diphtheria . . .	Four weeks after the commencement of attack, if no complications.	Twelve days.
German Measles . . .	Ten days after appearance of the rash.	Twenty days.
Measles	Two weeks after appearance of the rash	Sixteen days.
Mumps	Three weeks, or one week after disappearance of the swelling.	Twenty-four days.
Ringworm	When examination shows no broken hairs, and no spores.	
Scarlet Fever . . .	Six weeks, or when sore throat, albuminuria and desquamation have disappeared.	Ten days.
Small Pox	When every scab has fallen off.	Sixteen days.
Typhus Fever . . .	Four weeks	Fourteen days.
Whooping Cough . .	Five weeks, or two weeks after cough and whooping have disappeared.	Twenty-one days.
N.B.—In each case the number of weeks mentioned represents the <i>shortest</i> time.		

DREAMS

Is there anything in this world sent by a higher Being that has not its use and meaning? It is generally believed that there is not, and consequently it has become an accepted belief that dreams are prophetic—some are sent as warnings, some to give happier thoughts and hopes, and others to give inspiration.

Those who think it profanity to believe in dreams should search their Bibles for the many instances in Scripture when people were "warned in a dream," and even those who doubt there being any significance attached to the visions of our sleep will almost always remember some dream they have had that was so vivid, so real, that it has impressed itself upon their memory for ever. It is probable too, that it was followed by a result that seemed immediately analogous to the dream. Many people believe that dreams go by contraries.

Foolish dreams—just a jumble of persons and things, with nothing definite and no connecting links—are not worth a thought, being too often caused by the heavy suppers and consequent indigestion; very horrifying dreams may be due to an excited condition or disordered nerves; but clear, vivid dreams, in which there is sense and reason, seem often prophetic, and to convey injunctions or warnings.

The following is a list of the subjects of dreams and the significance they have had for those that believe that our nightly visions should not be dominated "The baseless fabric of a dream."

Abode (a strange one).—Foretells changes in your life. If turned out of one beware of danger.

Aboard.—Going aboard a ship denotes success.

Abroad in a foreign land denotes change in prospects.

Absent Ones.—If that these are ill, it means they are in danger; if well, they are prosperous.

Abundance of good things is significant of want.

Abyss.—Falling into one, denotes trouble at hand.

Acrobat.—Danger and risk of life.

Adornment.—To dream of dressing smartly denotes probable loss of means.

Adversity signifies prosperity.

Advice.—Being advised or admonished foretells business troubles.

Affection (slighted), means the reverse.

Agony denotes prosperity.

Amputation of a limb is a warning of the death of some relative.

Anchor means a sailor for a lover or husband.

Angels signifies peace and happy intercourse with friends.

Anger towards a friend indicates that he is a good and tried one.

Angling.—If you catch a fish it is a sign of prosperity.

Ants (and other insects) denote change of abode.

Apes.—Denote enemies and danger.

Apparel.—White, good luck; black, bad luck; blue, prosperity; scarlet, calamity and loss of friends; variety of colours, a chequered future.

Applause given to oneself means scandal.

Apples signify prosperity and love.

Ashes means jealousy in a lover, also calamity and loss.

Assassin.—Shows pretended friends whom you cannot perfectly trust.

Asylum.—Denotes trouble and most likely poverty.

Auction.—If you buy anything at one you will suffer a loss.

Baby.—Dreaming of nursing one indicates sorrow.

Bagpipes show that you will be poor.

Ballif.—Denotes a favourable change in your fortune.

Balcony.—Sitting on one with a lover, it is a token of his jealousy.

Balloon.—Denotes speculation in business.

Banquet.—Denotes prosperity.

Bath.—A cold one means pleasure, a hot one, pain.

Bear.—Petty worries to come.

Bed.—Making of one shows you will move into a larger house.

Beef denotes plenty.

Bells denote speedy marriage, or fortune.

Beggars, if you relieve them, signify good fortune.

Birds flying denote our riches following them.

Biscuits signify sickness.

Bite.—A supposed friend will do you harm.

Blindness, to one in love, shows her choice is not good.

Blood is a bad sign.

Boats in clear water are a sign of prosperity; if in rough water, adversity.

Bonnet.—A new one foretells a new admirer.

Books show a young woman she will marry a learned man.

Boots warn you of imprudence.

Bouquet means delay in marriage.

Bracelets denotes speedy, wealthy marriage.

Bread is a sign you will always have enough.

Bride.—To dream you are one denotes you may never change your name.

Building, if new, denotes a speedy change of residence.

Bull.—Means you are in danger.

Burglars is a great sign of success in life.

Cage with a bird in it denotes success in your next venture; with no bird, disappointment.

Candles, burning brightly, signify good news; going out, bad news.

Cards denote a speedy marriage, and if there are many diamonds, you will be lucky.

Carriages, if dreamt of, mean loss of wealth.

Cats are prophetic of treachery.

Cattle, peacefully grazing, denote pro-

sperty; fierce-looking, long-horned cattle, you will be attacked by enemies.

Children foretell success in business.

Church or Place of Worship.—If you are there in black, expect a wedding in your family; if in white, a funeral.

Cocks Crowing.—Beware of a treacherous friend.

Coffins are an omen of death.

Complexion is one of the dreams of contrary; if you see your face spotted and freckled, expect a return to health if you are not well.

Concerts.—There will be disagreements between you and your relatives.

Cooking denotes some festivity in store.

Corn or Cornfields denote prosperity and fortune.

Corpse.—The omen of a hasty and unfortunate marriage.

Dancing.—Your plans will succeed, and you will marry well.

Dead Friends means news of living ones abroad.

Diamonds indicate wealth and prosperity.

Dirt indicates misfortune.

Disputing.—You will quarrel with some business person.

Doctor.—Denotes you will not need one.

Dogs, fondling you, are omens of good; if one bites you, a friend will be traitorous.

Donkeys foretell the death of a well-known person.

Driving is a forerunner of loss of money.

Drowning is a sign of danger at hand.

Eating signifies quarrels and losses.

Eggs suggest gain and profit in trade.

Enemy.—If you dream you beat one, you will triumph.

Ermine is a sure sign of coming greatness.

Earwig.—Means an enemy.

Evergreens show lasting love, honour, and happiness.

Faces.—Strange ones are significant of change of residence.

Fair.—If you are at one it is prophetic of failure in business.

Famine.—A dream of contrary.

Farwell.—Shows changes for the better in your business.

Farthing.—Expect bad news.

Fence.—Denotes a rise in prospects.

Fiddle or Violin.—Denotes a speedy

- marriage unless a string breaks, when you will become a bachelor or old maid.
- Fields**, green and pleasant, show you will have happiness.
- Fire**.—A warm bright one shows the approach of friends and happiness.
- Flag**.—A waving one is a warning of danger.
- Floating** in water denotes long life.
- Flowers**, if beautiful and fresh, are omens of good ; if dead, of sickness ; if only red and white, a death.
- Flying**, denotes an escape from difficulties and troubles.
- Fog** should warn you that you will be unlucky.
- Forest**.—Wandering in one shows that you will ere long achieve distinction.
- Fruit**.—Almonds foretells difficulties ; apples and apricots, prosperity ; cherries, disappointment ; currants and figs, success ; gooseberries, many children ; grapes, happy marriage ; lemons, quarrels ; melons, recovery from sickness ; nuts, riches ; oranges, losses ; peaches, happy love.
- Garden**.—A well stocked one denotes success in every business or profession in which you are engaged.
- Ghost** is an omen of evil.
- Gold** means poverty.
- Goose**.—If a young man dreams of one, he will have a foolish wife.
- Gun** denotes the death of a friend.
- Halling or Snowing** denotes losses in business.
- Hair** is a sign of approaching sickness.
- Hands**, if tied, denote coming difficulties.
- Harp**.—Some one is trying to injure you.
- Hay**.—Denotes prosperity and respect.
- Hedges** are signs of pleasant prospects.
- Hedgehog**.—You will meet a long lost friend.
- Hens** signify joy and happiness.
- Home** of your childhood, an indication of happy love and peace.
- Homeshoe** is indicative of good luck coming.
- Hunting**.—If you make a capture is luck, and vice versa.
- Husband**.—To dream you have one, if you are not married, is a dream of contrary. You will not marry.
- Ice** denotes failure in your undertakings.
- Ill**.—To dream you are ill signifies temptations to be resisted.
- Ink** means your plans will succeed, but if you soil your fingers, or spill it, you will fail.
- Ivory** signifies prosperity in all things.
- Ivy** is a sign that your lover or your husband and your friends are true and constant.
- Jackdaw**.—Beware of danger.
- Jewels** are lucky.
- Journey**.—Shows a great change in your circumstances.
- Jug**.—If you drink out of one you will have to take a journey.
- Keys**.—A bunch mean riches ; if you give one, it will mean an offer of marriage ; if you lose one, you will be disappointed.
- Kissing**.—If your sweetheart kisses another, he will prove unfaithful.
- Kite**.—Denotes promotion in life.
- Knives** are omens of evil, particularly if they be clean and bright.
- Labour**.—To dream you are working hard, signifies that your life will be an easy one.
- Ladder**.—You will succeed in what you are attempting.
- Lamps**, burning brightly, are omens of success to what you wish ; dimly, they foretell sickness.
- Lark** denotes good health.
- Laughter** means tears and troubles in store.
- Laurel** means success and victory.
- Lawyer** is an omen of loss.
- Leaves** upon a tree show a wedding.
- Lending** is an omen of annoyance from friends.
- Letter**.—The receipt of one means very unexpected news ; of sending one, that you will give a present.
- Lightning**, to see without hearing thunder, is to the sailor a good voyage ; to the farmer good crops ; to the lover good luck.
- Lion** means future power.
- Locks** that you cannot unlock portend great difficulties in store ; if you succeed in turning the keys you will gain victory over your troubles.
- Love**.—Whatever you dream about this sentiment it foretells the contrary.
- Luggage** denotes trouble.

- Mad Dogs** are lucky to dream of.
- Marigolds** show constant lovers and friends for you.
- Marriage** means a funeral.
- Mélicène**, if nasty, suggests some small vexations.
- Miss** denote there is scandal about you.
- Mirror**.—It is unlucky for a young woman to see herself in a mirror.
- Money**, if you pay it, is prophetic that you will really be able to do so; if you receive it, it is the sign of the birth of a child.
- Monkeys** dreamt of are omens of treacherous friends.
- Mother**.—Is a good omen.
- Mushrooms**.—Mean wealth.
- Musie** signifies news from distant friends.
- Nest** foretells marriage.
- Nettles** show good fortune and honour.
- Night**.—Sudden darkness overtaking you is a sign of misfortune.
- Nose Bleeding** is a warning of sickness.
- Nuts** with good kernels show you will gain money.
- Oak**.—A vigorous green one is a sure sign of success and happiness; one struck by lightning is an omen.
- Onions**.—You will discover money.
- Organ**.—Is an omen of good fortune.
- Owl**.—Foretells sickness.
- Pain** signifies that you will have pleasure.
- Palace** foretells success.
- Parcel**.—One that you open means news from afar.
- Patches**.—To dream you are patching and mending clothes prognosticates that you will have new and good ones.
- Pearls** foretell that you will die rich.
- Peas**, growing, represent good fortune to the lover.
- Pheasants** or other birds flying foretell a legacy.
- Pigs** are the omens of false friends and a faithful lover.
- Pigeons** flying are a sign that your sweetheart is good and true.
- Pineapples** signify invitations to festivities.
- Pistol** is an omen of evil.
- Play**.—Foretells a happy union.
- Police**.—There is honour in flow.
- Primroses** are very unlucky flowers to dream of; they are the forerunners of sickness and trouble.
- Preclipses**.—A warning to turn back from whatever fresh undertaking you are thinking of.
- Purse**.—Is the harbinger of great happiness.
- Race**.—If you win one, means you will succeed in business.
- Rags** denote prosperity.
- Rail**, travelling by, denotes a friend will pay you a visit.
- Rain** foretells trouble.
- Rats** are significant of enemies at hand.
- Rice** is a dream of riches.
- Ring**.—Signifies an offer of marriage; the breaking or losing of one signifies widowhood.
- River**.—To see one calm and bright, means peace and tranquillity; if swollen and turbulent, trouble and perplexity.
- Ropes**.—Beware of entering into agreements for a time.
- Roses**, if in season, mean good luck; if you dream of them in winter, it is bad luck.
- Scissors** signify a speedy marriage.
- Serpents** or **Snakes** denote deadly enemies.
- Silk** is a token of success in your next venture.
- Silver**.—You will not need to fear poverty for a long time.
- Soldiers** signify quarrelling.
- Spiders** indicate that you will receive money.
- Straw** signifies loss.
- Teeth** coming out is very unlucky, denoting sickness approaching.
- Tempest** is significant of troubles that you will overcome.
- Thorns**.—These are bad; they mean small trials and difficulties at the least.
- Tumble** denotes the probable failure of your wishes.
- Tunnels** denote short-lived troubles.
- Umbrella** signifies great losses.
- Valentine**.—One received by a girl is a very bad sign, showing her sweetheart is ill.
- Walls** show you will not be successful.
- Washing** means recovery from illness.
- Wedding**.—Indicates a funeral shortly.
- Weeping** is a sign you will rejoice.
- Wife**.—If you are not married, signifies that you will be an old maid.
- Wounded**.—A wound means rejoicing.

HOW TO DRESS

FOR HEALTH

The ideal clothing should be of such material as will protect the body from the too heating rays of the sun in warm climates, and induce so high a temperature in cold regions and seasons that the body will not suffer from chill. It should also be of such material that its weight will not be an incumbrance or cause fatigue during exercise.

It should be so fashioned that its weight will rest mostly upon the shoulders, and not bear too heavily upon the abdominal muscles. It should not press too closely upon any part of the body, lest it obstruct the circulation of the blood.

It should be fashioned in such a manner as to furnish the least possible obstruction to locomotion, and indeed to all motion, so that we may be able to walk and work with nearly the same ease as if divested of all clothing.

One of the most important conditions to be maintained in the adjustment of our clothing is a uniform temperature over the surface of the body, without pressure and with the least weight. In our climate, flannel, silk, or woollen textures, as a general rule, should be worn next to the skin over the whole body, from the neck to the wrists and ankles. If there is any idiosyncrasy which prevents such material from being thus worn, it should be used as a second covering.

When the temperature is such as to require extra clothing or wraps for the chest and upper extremities, the lower extremities also should receive attention.

THE CORSET

Many physicians have denounced the corset as a most pernicious

garment, and have refused to compromise with it in any of its forms. But in spite of these protests, women still cling to it, and still declare that they must wear it or perish. The death of women occurring under the influence of anaesthetics has in many instances been traced to impeded circulation resulting from tight corsets. Many other injuries to health are also the result of tight lacing.

"But I do not wear my corsets too tight," every woman is ready to answer. No woman ever did, if we accept her own statement. They themselves may be ignorant of the harm they are doing their health, for Nature is long-suffering and for a time yields her rights so quietly that we do not realize how we are imposing upon her. But a day of reckoning will surely come to the woman who tight laces—and let us hope it will not come too late.

UNDERWEAR

The combination garment is far better for health than the chemise and drawers. In winter this should be of flannel; in summer of silk, long-cloth, or cambric. Over-drawers, or bloomers, are preferable to three or four petticoats.

While most climates seem to require that we should protect ourselves well from its fitful changes, it is nevertheless true that many persons accustom themselves to more clothing than they really need. There is no doubt that the less one wears the better, provided there is no sensation of cold. The thicker the clothing, the heavier it is to carry about, and the less readily does it permit the constant and invisible exhalations

from the body to pass through its folds. A thin, light flannel cloth is often as warm as heavier goods. All flannel used for underwear should be light, warm, and porous—and in its manufacture a little cotton should be mixed with the wool to prevent shrinking. Under-garments of *all-wool* flannel, if washed every week, as of course they should be, soon become nearly impervious to air and they ought then to be discarded. Those persons who object to flannel worn next to the skin in summer should wear, instead, thin silk, or any other material rather than cotton, as this has a peculiarly drying and heating effect upon the skin. There should really be more clothing on the limbs and extremities than on the trunk of the body, as the former are remote from the vital organs whose constant action increases the temperature of surrounding parts, and the blood on which the system chiefly depends for its warmth has to traverse long distances in order to reach their extremities, and must suffer a gradual diminution of heat as it flows outward.

SKIRTS

Skirts used in walking should be short enough to clear the pavement, and to prevent their lower edges from becoming damp. They should also allow freedom to the feet and limbs in that most healthful of all out-of-door exercises. There should be no heavy trimming round the edge of a petticoat, or it will cling in to the feet and thus impede free action.

STOCKINGS

A warm merino stocking is best for winter wear. For keeping the stockings in place no garters are to be thought of, as the compression of the calf of the leg is very injurious—stockings must be held up by suspenders.

BOOTS AND SHOES

In cold and damp weather special pains must be taken to protect the feet with warm coverings, to elevate their soles above the ground, by many layers of stout leather rendered nearly impervious to damp and

moisture, and, also, to give as much freedom to the movements of the feet beneath their coverings as ease in walking will allow. High-legged boots should never be dispensed with during the winter season. Be sure to have the soles of your shoes broader than your feet, and the heels low, if you would walk with ease, and avoid corns and bunions. To ensure warm feet in winter and not overheated ones in summer, wear heavy soles the year round. The higher the tops of the boots, the warmer the ankle, provided they are so loose that the circulation is free.

Calf-skin is the best leather for ordinary wear; but, while goat-skin is no protection against wet, its porous nature allows the exhalation from the foot to pass off freely. Nothing should be suffered to interfere with this function of the skin. Cork-soles, covered on the surface with cloth, and goloshes, are too impervious to the air. Boots and stockings should be changed frequently, owing to the moisture of the foot.

HEADGEAR

One essential in headgear is lightness. Weight upon the head is injurious. A hat or bonnet so shaped as to shade the eyes, need not be heavy. When choosing a hat the best advice is—select one that is light, becoming, and does not press upon any part of the head. Get all the shelter possible in headgear without flying too much in the face of the "mode."

MEN'S CLOTHING

The clothing of men has for a long time subserved the legitimate uses for which it was designed. Each part is fitted to the body so as to keep the temperature equable. Its weight is borne on the shoulders; and while it is loose enough to give free circulation, it is yet not loose enough to lessen its protecting power. The tall hats of men form the most prominent exception to the adaptation of their clothing to proper uses. The covering of men's feet is admirably adapted to their protection from cold and damp. The soles of their boots are broad enough to allow the feet to expand,

as Nature designed it should, when pressed upon by the weight of the body; and the toes are wide enough to allow them to rest upon the sole separately, producing the elastic rebound which enables one to walk without fatigue. That there are men foolish enough to cramp their feet in narrow boots, we are aware; but these are a very small minority, and are not the leading ones who are copied by the masses.

The nicely-fitting trousers, that permit such freedom in the movement of the lower limbs; the comfortable vests, that preserve a uniform temperature of the chest; and the coat that so little inconveniences the wearer; with the overcoat, so easily removed when the temperature of the place renders it unnecessary—these are all beautifully adapted to their legitimate uses.

It is true that fashion at times renders each of these garments less useful and convenient, as when dandies appear with trousers so tight as scarcely to permit bending the knees, or with vests open nearly to the waist that they may display their faultless linen; or even with coats cut in at the waist to fit a figure girthed in stays; but these freaks of fashion are usually of short duration, and the good sense of the masses does not adopt such extremes.

CHILDREN'S CLOTHING

The long skirt, dress, and cloak worn by babies are really evils. A delicate child has hung upon its tender body a flannel skirt a yard long, and over that a cotton skirt equally long, and over that a dress to cover both, often weighted with heavy embroidery, and, if the child is carried out, a double cloak, longer than all, so that the skirts reach nearly to the floor as the infant is borne on the nurse's arm. Think of all this weight attached round the waist of the child, hanging over the little feet, pressing down the toes, and even forcing the feet out of their natural position. How much of deformity and suffering this fashion produces none can tell; but that it is a great discomfort to the baby, every thinking mother must perceive.

High necks and long sleeves should be the rule in babies' dresses. To expose the delicate chest and arms of a young child in our cold, changeable climate is often to bring on pneumonia, and greatly to lessen the chances of life.

The weight and pressure of wide sashes, long, full bows, and over-skirts, are very heating and wearying when laid upon little backs. All that tends to rob this early age of its naturalness and simplicity deprives it of its greatest charm.

BECOMINGLY

In order to dress well, it is necessary that we should study our own appearance critically, and try to discover what style will most become our particular type of beauty. Some women, without thinking about it, instinctively choose what suits them best in form and colour, but the majority throw themselves upon their milliners, their dressmakers, their fashion books, for a choice of a bonnet, a dress, or a fashion. Milliners, dressmakers, and fashion-books have necessarily a monotonous sameness, all drawing their inspiration from one source; the result is a distressing want of individuality.

TALL PEOPLE

The long slim figure can "carry off" more ornamentation than any other variety of the human form divine. If the height be excessive, white and light colours should be avoided; though, if the slimness be excessive, nothing is better adapted to apparently diminish it than white or light colours. A very tall and very slight woman should therefore avoid these pale shades, but if her head should be—as it sometimes is with very tall women—too small for her body, she may with advantage wear a white or light-coloured bonnet or hat. But if the height be moderate, and the contours proportionate to the height, this kind of figure may wear almost any colour, without being rendered conspicuous.

Tall, thin girls should adapt the cut and finish of their dresses and coats to suit their figures, and study the

form of frills and the position of pockets with a special view to themselves. A good dressmaker can always advise on such points.

SHORT PEOPLE

Short women should wear their trimmings arranged lengthwise as far as possible. Long, plain skirts give every advantage to a short woman. Large patterns make short people look insignificant. They should only wear the very smallest, if, indeed, a pattern is necessary at all.

A shirt and skirt differing from each other in colour is one of the easiest ways of looking stumpy. Another is to wear a short coat with basques, and of a colour different from that of the dress. Checks also tend to apparently shorten the figure, while perpendicular stripes give it its full length, even a little over. Horizontal lines have exactly the contrary effect. These should be avoided by short people.

STOUT PEOPLE

Stout figures should wear only the darkest colours, and if they wish to add to their apparent height they should wear striped dresses; if the stripes are narrow and well managed in the cutting out, they serve to disguise stoutness; if they are wide, and cross and recross each other in the trimming, they have an exactly contrary effect.

Stout people should never indulge in a breast-pocket, or any trimming that gives an extra look of width to the figure. Bright colours make a stout woman look stouter.

THIN PEOPLE

Some hints for slight people have already been given in the article headed "Styles for Tall People."

The thin and angular woman or girl may wear full and flowing draperies. Low bodices are out of the question, so are short sleeves, if the arms are also thin. Square bodices may be deftly managed so as to conceal thinness; cut so as to cover the "salt-cellar" collar bones. The neck must be desperately thin—thin to "scragginess"—if it cannot be revealed to

this extent. The fichu is for this reason perfectly adapted to very slight figures. It can be gathered in numerous folds across the chest, while, at the same time, it lies perfectly flat across the shoulders, where anything bulky is very ugly. A form of mantle that is gathered in at the waist in folds that spread out at each side, falling below the waist, is excellently suited to the thin, as it supplies fullness without absolutely veiling contours.

Angularity is only disagreeable when the bones are large. With small bones a woman must be "viciously thin" to look angular; but with large hips, large shoulders, large wrists, large ankles, large joints, and thinness added thereto, the best she can do is to hide as many of her angles as she can, and to do everything in her power to hide them under a covering of flesh, a covering which very often in such cases makes all the difference between a plain woman and a handsome one.

COLOURS

Never choose a colour because it is pretty in itself. Choose what will suit your hair and complexion, your costume, your circumstances and your purse. The fair of complexion may often wear yellow, amber, and orange, if the colour of the hair contains any hint of these tints. The usual colours for the blonde are pale blue, pale green, pale mauve, and a certain reddish tone of the same colour, deep wine-colours, and sapphire blue, if not too blue.

A green dress or hat throws its complement of red upon the face. If the complexion be pale and deficient in ruddy freshness, or admit of having its rose-tint a little heightened, the green will improve it, though it should be delicate in order to preserve harmony of tone. But green changes the orange hue of the brunette into a disagreeable brick-red. If any green at all be used, in such cases it should be dark. For the orange complexion of brunette the best colour is yellow. Its complementary, violet, neutralizes the yellow of the orange and leaves the red, thus increasing the freshness of the complexion. If the skin be more

yellow than orange, the complementary orange falling upon it changes it to a dull, pallid white.

Blue is the standard colour for a blonde, as yellow is for a brunette. But blue injures the brunette by deepening the orange, which was before too deep. Violet yellows the skin, and is inadmissible except where its tone is so deep as to whiten the complexion by contrast. Rose-red, by throwing green upon the complexion, impairs its freshness. Red is objectionable, unless it be sufficiently dark to whiten the face by contrast of tone. Orange makes light complexions blue, yellow ones green, and whitens the brunette. White, if without lustre, has a pleasant effect with light complexions; but dark or bad complexions are made worse by its strong contrast. Pleated laces are not liable to this objection, however, as they reflect the light in such a way as to produce the same effect as grey. The following colours will suit a brown-haired, white-complexioned, tall girl—greenish blues, warm browns, peacock blue and green, dark red, pinkish grey, and certain soft shades of violet and mauve.

For a tall, thin girl, with light brown hair, dark eyebrows and lashes, and a not very good complexion, the following colours are best:—Warm browns and greys, and soft greyish shades of blue, not too light. Brighten up the greys and browns with pretty ribbons in soft tints.

When there is the least red in the hair abjure pink and the paler tones of red. When the complexion is pale and inclines to sallowness only the faintest tones of blue or soft heliotrope should be put near it; pure white never. But if the tinting of cheeks and lips is pink and white softly mingled, then pure white is the most becoming of all possible tints, if tint it can be called which is absolutely colourless. With such a complexion one may wear almost anything, if the hair is free from red or gold. But there are certain shades of blue that rob even this delicate bloom of its highest charm. The blue that was once called "royal" belongs to this category, also the blue that is used in the laundry—before it is mixed, be it

understood. There are some shades of pink and magenta that are equally trying to the colouring of the perfect blonde. Rose-pink, of the paler kind goes beautifully with pink and white skins. A true blonde can also wear Quaker grey, and tussore silk, with just a line of blue or soft pink about her throat.

Half way between the blonde and the brunette comes the "nut-browne mayde," who is often puzzled as to what colours suit her and what do not. Let her take a bit of bright blue and lay it round her hair as she looks in the glass. If her tinting seems to change from vagueness to a positive contrast between the white and the red, she may not only wear blue, but also green in its brightest expression—midway tones for the daytime, and paler for artificial light.

There is a very soft bright tint of palest green, which brings out as no other colour ever can the clear tones of a rather dark complexion with brown eyes or black, and well-marked brows. The real brunette can adopt nothing better, and the nut-brown maid may safely share it with her. Even a black gown, most trying to the real brunette, may be made becoming by putting a band of this bright green round the neck.

Starch blue is a most valuable tint for those whose pink and white are not of the first-rate order. Bright cornflower blues are often very trying.

Some complexions are drab, and in this case their owners should never choose kindred tones for hat or toque. A touch of scarlet and crimson reduces the greyiness of the skin and helps out every rosy tone. People with drab complexions should avoid bright pinks.

The nut-brown maid is often bettered by a knot of glowing ribbon in some rich tone of dark blue, metallic green, soft sulphur yellow, or vivid crimson. Before choosing any colour to wear one should place it in proximity to the face and note if the results are pleasing or the reverse.

CHILDREN'S DRESSES

Simplicity should be the dominant note in all children's dresses. White or cream colour, suits little people

best as a rule. But when other shades are used they should be of a delicate tint. Materials with a pattern are not suitable for children—neither is much trimming of any description.

GENERAL HINTS

Many a girl fancies that severity and tailor-mades suit her best, when in reality she needs softness and frillery and all that the dressmaker's art can do for her. Masculine-looking women are the better for being softened down and feminized by flutter and furbelow, and it is on a womanly woman, a girlish girl, that tailor-mades look best.

A girl with large feet should not wear her skirts so short as unduly and unnecessarily to exhibit those extremities. A girl with a thick waist can arrange her garments with a slight tendency to fulness upon the hips, by which means she will diminish in appearance the size of her waist.

A little jewellery, well chosen and really good, may be a distinct advantage to the appearance, but too much of it defeats its own end.

Gold or silver belts make the waist look larger. Any sudden contrast of colour makes the waist look large by drawing the attention to it. It is better always to wear a belt of the same tone of colour as the blouse.

There is an old saying that the face suffers for every inch of neck uncovered by the dress. This may possibly have some truth in it, but there is no doubt that a pretty, round, white throat looks charming with the dress cut away, and perhaps a row of pearls encircling it.

If a woman desires to make herself picturesque, let her not fancy for a single moment that a wild coiffure and an untidy person constitute that state. She may take counsel with an artist or a good dressmaker as to the style of dress that suits her, and, having judiciously selected her style, carry it out with due regard to that moderation which is never more valuable than in matters relating to dress.

Neat boots are an important item in the wardrobe of the well-dressed. Many women wear their boots too small, a practice which brings its own

nemesis in the shape of corns and bunions, which necessitate very large and roomy boots and shoes after a few years. Boots should be worn in turns, not day after day, as they so soon get out of shape. When cleaned they should be kept in a box with the cover on. It is well to give a good price for one's boots, and the same advice applies to gloves; much money is constantly thrown away on cheap boots and gloves.

Never choose a cheap veil, or one with many spots. Both are extremely bad for the eyes. To have well-fitting clothes is one of the points by which a gentlewoman is distinguished from her lowlier sisters. It is not so easy a matter as might be imagined, needing a little thought and care, and the expenditure of a great deal of money. Skill is costly, and only skill can compass the exactitude of fit which is the chief charm of a well-made dress.

A sense of the fitness of things is shown not only in what we wear, but in when we wear it. The woman who breakfasts in a satin gown is much more truly ridiculous than the man who sits down to that early meal in a dress-coat. Woollen materials in winter, and cotton or linen in summer, are the most suitable for the early morning.

ECONOMY

One of the first principles of true economy is to buy everything good, if not the best of its kind. Another is, to buy nothing that is not really wanted, even if it appear to be a great bargain. It may quite consistently be a "great bargain" and yet be very expensive to the buyer.

Tidiness is an essential part of true economy; things that are put away properly and neatly last double as long as those thrown together anyhow, and they also look much nicer until the last.

Economy is much furthered by taking care of one's garments. Clothes should be well-brushed, cleaned, and mended directly they need it. "A stitch in time saves nine," and also saves the garment for many months' longer wear.

Have boots and shoes repaired immediately they show signs of requiring it, otherwise they will get past mending. Everything should be replaced as it wears out, otherwise there will come a day when all will have to be replaced at once, for garments have an astonishing way of wearing out together.

Buy good materials, for these will "do up" again and again, and not, as cheap ones invariably do, look shabby when donned for the sixth or seventh time. It should be borne in mind that bright colours *date* far more than do neutral tints. A bright blue dress is remembered when a stone-coloured, grey, or cream-coloured is forgotten. This in itself is a very fair reason for the economical to refrain from purchasing hats and dresses of striking colours or patterns. Neutral tints are always in good taste and have the merit of never "clashing" with other colours.

It is an excellent rule always to buy articles of clothing which harmonize with each other, so that a hat can be worn with any dress, and the same with gloves, belts, neckties, etc.

It is a good plan to wear black very often for dinner, if dressing for that meal be the rule. Black silk will "do up" over and over again, and, worn with different coloured ribbons, one does not get so tired of it. Summer silks come in nicely for dinner-dresses, with pretty fichus. There are also the resources of dyeing and cleaning—a dress of really good material can generally be dyed with advantage.

"Keep a thing, its use will come," is a valuable maxim in dress. Only throw away what is utterly useless. Scraps of silk, ribbon, and lace may all "come in" usefully at another time, and a judiciously-stored odd-and-end bag saves many a sixpence.

Some good old lace is an invaluable possession to a woman who has to dress inexpensively. Like jewels, it may be worn frequently without incurring the reproach that invariably falls upon the wearer of a too well-known dress. With neatly arranged hair, well-fitting boots and gloves, a spotlessly clean person and a becomingly made dress, a girl can

always look a lady even if her costume is of the most inexpensive kind.

MEN'S DRESS (IN TOWN)

For morning wear the morning-coat or jacket or the tweed suit is correct. After lunch the well-dressed man may continue to wear his morning coat or the regulation frock coat, with trousers of some neat, striped grey mixture. The tailor's name for the material of these is "mixed chevots."

It is not considered good form to wear very light trousers except on special occasions, such as weddings, garden parties, or afternoon assemblies of a festive kind. Even then it is better to err on the quiet side than to be over-loud. Waistcoats may be single or double-breasted. There is no restriction as to the colour of the tie.

The Park suit may consist of a grey or light brown frock-coat, with waistcoat and trousers to match, and this is the usual dress for Ascot, the smartest of all the races. At Sandown the low hat or tweed suit, or long racing coat, are worn, except on the days when Royalty is present, when the King, or Prince of Wales, will set the example of wearing a black coat and silk hat, and all other men are expected to follow his example.

For a morning walk in the Park in summer the straw hat, or low hat and tweed suit, are as correct as the black coat and silk hat. But it must be remembered that a straw hat or low hat cannot be worn with a black coat of any kind. The "pot" hat and brown boots are permissible with an overcoat, under which there may be a tweed suit, but brown boots may not otherwise accompany a black coat, though they are admissible with the Ascot suit. There are special suits for all kinds of outdoor amusements, such as shooting, golfing, tennis, boating, driving, riding, bicycling, fishing, hunting, etc., but into the details of these it is unnecessary to enter; however, a few hints may be useful.

One of the mistakes made by novices in the hunting-field is that of getting themselves up in "pink," though they may not be a member of any hunt. This is more particularly the case when

the packs are near town. Good West End tailors would never allow their clients to make such mistakes as these. They are the best authorities on all the minutiae of male attire, and it is well for the customer to put himself unreservedly into the hands of the long-experienced in such matters.

The usual riding costume for the Park consists of knickerbocker suits with Norfolk, or other country jacket, brown tops and bowler hats. Straw hats are often seen on riders, but these have not quite so good an effect.

It is easy to stultify the whole effect of the most perfectly made suit by the addition of a single incongruous article of attire; such as a silk hat or patent boots with a shooting-suit.

It is incorrect to wear other than black trousers with a dress-coat, and the shirt front should be of immaculate whiteness. This is the only correct costume for evening wear on all occasions of a formal nature. The dinner-jacket may take the place of the dress-coat for home wear and at dinners in houses where one is a familiar guest. It is also permissible at the play, but it would be incorrect to wear it when accompanying ladies.

It is not necessary to wear evening dress in the stalls, private boxes, and dress circle of the theatres, though most people do so.

WOMEN'S DRESS (IN TOWN)

In the morning the toilette should be comparatively simple, even during the season. In the afternoon a certain amount of elaboration—more or less according to circumstances—is usually imported into the costume.

Evening dress includes two styles, full and demi-toilette. The former exacts uncovered arms and shoulders; the latter admits of partially covering both. The former comprises ball and dinner dress. The latter suffices for the theatre. Full dress is worn in private boxes and stalls at the opera, but it is only the women of the upper middle classes who wear full dress at the theatres. Ladies of high rank who sit in the stalls usually keep on their mantles, which are of a sort adapted to the season and the draughty character of many theatres.

At fashionable restaurants evening dress is the rule at the dinner-hour. Those who are going on to opera or dance wear full dress at these dinners.

At fashionable race-meetings, such as Sandown, Ascot, Epsom, Goodwood, etc., garden-party dress is usually seen, though tailor-mades are by no means out of place, when smartly built and accompanied by something rather ornate in the way of headgear.

At weddings the bride's white satin is often replaced by silk muslin, chiffon or lace. Should she elect to be married in travelling dress, her bridesmaids wear smart visiting costumes instead of the usual white or light-tinted bridesmaidly attire. A widow, when marrying again, wears grey, mauve, heliotrope, lavender, biscuit or deep cream-colour, or any tint not mournful or lugubrious. She has no bridesmaids, but is usually accompanied by one "maid of honour," whose dress must not be so light of hue as to eclipse her own.

Dress on the river partakes of the nature of seaside costume, but is usually less rigorously tailor-cut. More ornament is permitted than in the case of yachting dress, but lace-trimmed white petticoats and black patent shoes are equally out of place for both.

The object of a fashionable woman in dressing is to make herself distinctive without becoming conspicuous—to excel by her union of graceful outline and fidelity to the fashion of the moment (no easy task)—and, while offering no striking contrast to those around her, so to individualize herself that she is one of the few who remain in the memory, when the crowd of well-dressed women is recalled only as an indistinguishable mass.

WOMEN'S DRESS (IN THE COUNTRY)

For seaside and country wear tailor-made costumes are indispensable, the materials being cloth, serge, homespun, and other woollens.

Travelling dresses consist of tweed, serge, Irish frieze, homespun, and other all-wool materials, and are of the class of tailor-mades.

In hot weather white muslins, piques,

and flowered or pale muslins may be worn by the sea, with open-worked white stockings and white shoes. Alpacas, surahs, foulards, and mohairs are suitable for seaside and travelling dress. To wear satin, brocade or rich heavy silks is as great a solecism as for a man to don frock coat and silk hat at seaside places or when travelling. Glittering bead trimmings and elaborate embroideries are also quite out of place, and should be reserved for more ceremonious occasions.

MOURNING

Mourning for men is hardly ever worn except in the first two or three weeks after bereavement. A widower's mourning is not worn for more than a couple of months, unless the widower should belong to the class who cling conservatively to old customs, and believe that to doff his weeds would imply some disrespect to his late wife.

The correct period for mourning, as observed in England by the upper middle classes: are as follows—

For a husband: crape for a year, black for a year.

For father or mother: crape for six months, black for three.

For brother or sister: crape for three months, black for three.

For son or daughter: crape for six or nine months, black for three more.

For uncle, aunt, or niece: black for

two months, modified black for one.

For grandfather or grandmother: crape for three months, black for two.

For cousin: black for two months.

These are the general rules for mourning, but it is needless to say that they are often modified by circumstances. Wives must remember that they wear mourning in the same degree for their husband's relatives as for their own.

All deep mourning dresses are in woollen materials, many of which are manufactured with a view to making them resemble the texture of crape as nearly as possible. Suèdes and silk gloves must be worn during the first three months of a widow's mourning, and after that French kid may take their place. It is also permitted to widows to lighten the intensity of their weeds by the addition of collar and cuffs of white batiste. A cap is usually worn by widows, but is not compulsory.

At the end of six months a widow may drop deep crape and distinctive headgear and take to "black silk" if she desires. During the last three months of mourning she may wear grey, white, lavender, violet, and indeed almost any tint save green, blue, and brown, with her black gowns.

Crape is the accepted sign of mourning and serves as a shield and protection to the wearer from inquirers that would be painful to answer.

HEIGHT IN RELATION TO WEIGHT

MAN

Exact Stature.		Mean Weight.		
ft.	ins.	st.	lbs.	lbs.
5	1	8	8	or 120
5	2	9	0	" 126
5	3	9	7	" 133
5	4	9	13	" 139
5	5	10	2	" 142
5	6	10	5	" 145
5	7	10	8	" 148
5	8	11	1	" 155
5	9	11	8	" 162
5	10	12	1	" 169
5	11	12	6	" 174
6	0	12	10	" 178

WOMAN

Exact Stature.		Mean Weight.		
ft.	ins.	st.	lbs.	lbs.
4	10	6	6	or 90
5	0	7	0	" 98
5	2	7	12	" 110
5	3	8	6	" 118
5	4	9	0	" 126
5	5	9	9	" 135
5	6	10	0	" 140
5	7	10	7	" 147
5	8	10	12	" 152
5	9	11	6	" 160
5	10	11	13	" 167

The average weight of the clothes at different ages is $\frac{1}{4}$ of total weight of male body and $\frac{1}{4}$ of that of a female.

EDUCATION

THE OBJECT

The ultimate object of education is not the acquisition of knowledge but the development of character. In an age of competition, such as that in which we live, it is easy to understand how this fact can be obscured by the more obvious necessity of specialization, without which commercial success is daily more difficult of attainment. Nevertheless it remains true that a nation's greatness rests upon the moral character of its sons, and the real education question, as has been well said, is "not the question of theology or no theology in the children's schools, but the question how far it is possible to get any large section of our population to 'see life steadily and to see it whole.'"

It is a mother's duty to train her children, if her health and time permit—to train them during the first few years of their lives at least. But if this cannot be, a pressure that she cannot avoid being upon her, or if she cannot afford a governess, it will be better far for them to remain at home picking up such stray information as they can, than to let them attend a cheap unreliable school. At all events, at home they will learn no ill; at an inferior school there is every probability that they may lose every particle of their native refinement. When a mother can teach her children herself, having the necessary time to devote to the work and being quite competent for it, and at the same time possessing patience and perseverance to carry out her self-imposed task, it is likely they will be able to compete with those at a "finishing establishment," and win.

FIRST IMPRESSIONS

Everybody knows the value and lasting nature of first impressions. It is a very trite, well-ridden subject, in fact, where childhood and its management are concerned. But even

upon the adult mind first impressions upon any matter seldom if ever completely fade away. When a man is going to meet another on business of importance, the two having hitherto been strangers to each other, he is in nine cases out of ten careful and particular to a fault concerning his personal appearance, and puts an extra guard upon his speech and manner, in short he is mindful about the value of the first impression. He knows intuitively that the first glance this other man bestows upon him will photograph him either as liked or disliked in his memory perhaps for ever. And the first impressions made upon a child's mind will cling to him throughout life, toned down and partly eradicated it may be by experience, but the shadow is there.

Before sending children "out" in the world—and going to school is the preliminary taste they have of "leaving home for good"—let them be of an age to discriminate between right and wrong in a degree that will enable them to steer clear of the besieging army of snares that through all our lives, adult or childish, we have to contend against.

TRUTH

The tiniest child who can talk can be taught the significance and importance of strict truth. It is of no use to preach truth to it unless you yourself, its parent or its teacher, are truthful. At least, it must never know to the contrary, and it is no slight feat of the mind to be able to deceive a child effectually! They are clever and must possess much facial control and the hundred and one artifices of manoeuvre, who can withstand the clear, straight questioning of a child's eyes, or the deliberate questioning of its tongue.

Some children possess curious ideas respecting truth and the wickedness of telling an untruth.

Teach them that there is no elasticity

in truth! But to teach them thus so that they will follow your directions from a love of virtue and not from a fear of you, requires a person to hold partly the standard with his own hands.

HONESTY

Honesty is the sworn companion of truth, they are nothing without each other.

A child's parent or his teacher with whom he is constantly, and whom he makes his model, must be honest, if the child is to be honest.

CARELESSNESS

A very vexatious quality is this in children. Breakages, and other misfortunes, when a child is always perpetrating them, should not be passed over. This is a different matter altogether to being over severe with a child that has had an accident. It is always best to pursue a mild course and the child will then strive to become careful.

Careless children are those who are always getting into trouble from the want of thought, because it is their habit to make blunders over almost everything they undertake. With these, no amount of severe punishment will have a deterrent effect.

The punishment should be gradual, and consist in a deprivation of some favourite toy, amusement or occupation.

To give him a "long lesson" is nonsense. We want children to like their studies, and if we give them some by way of punishment, however will they like it? To deprive them of food is not right from the health point of view. To take away fruit or favourite food is also hardly to be advised, it makes children put an undue value upon such things, and, when such is taken away and given to another it is positively wrong. Brothers and sisters ought not to be made happier or richer by the failings of one of their crew.

Carelessness can be checked best by the parent and others unceasingly being on the alert to stop the child in his headlong propensities. Punishment should be "graduated." Give the delinquent fair warning, and let the first penalty attached to it be a

slight one, increasing in severity when there is little or no alteration in his behaviour. The greatest punishment this kind of child can have is to be put to bed for a whole or part of a day.

DESTRUCTIVENESS IN CHILDREN

All children are more or less destructive in their habits, but it results from a natural curiosity to get behind the scenes in many cases.

The habit of destructiveness is a very bad one, however, and the house in which children are allowed to be destructive is a very disagreeable one. These are the children that the careful-minded builders and lodging-house-keepers have in view, when they postscript their advertisements with "Children objected to."

With very little children there is no cure but to let them see by your voice and gestures that you do not approve of their handiwork. Older children must be strictly forbidden to pull things to pieces for the mere sake of doing so. For if they are destructive with one thing they will be with another, and their clothes will figure in such delinquencies to no small extent.

It is of no use to storm and scold over torn garments when their wearers are allowed to tear books. They see no difference in the two transactions. It is really all alike to them and is merely the result of what has been neglected in their home lessons—that they have never been taught to be careful.

POLITENESS OF CHILDREN

This is absolutely a necessary part of a child's education. Politeness is a certain refinement of manner and speech, very pleasing to see and hear, and also very pleasant to be the recipient of. From a child it is doubly grateful; there is something really worth having in the timid respectful homage of the little ones.

Above all should children be polite and nice in manner towards servants and inferiors generally. The teaching of children here is a little difficult. With them the line is so very fine-drawn between politeness and familiarity. In explaining the difference we are not unlikely to get into a kind

of fog ourselves, for the truth is their minds are so innocent at present respecting grades and station and position, that people are "all alike" to them. And then we are open, in teaching a necessary lesson, to impart also a very unnecessary one of pride.

Politeness is a kind of habitual reverence for others, springing from kindly loving impulses of the heart.

Of course there are the various "politenesses" between people of the world in their daily intercourse resulting from good breeding and a natural desire to be thought pleasant; but these can be thrown on and off "like a garment," and are not the artificial accomplishments to be taught to children.

The behaviour of children to servants is sometimes of a scandalous nature. Were it not allowed it could not of course exist.

CRUELTY IN CHILDREN

This is an acquired vice. Children are naturally tender-hearted. Boys are the chief delinquents here, girls are seldom cruel. Boys learn it from each other, and the principal teachers are those whose parents can sit quietly by and allow them to pull the wings and legs from flies and other little creatures without a word of reproach. That there are some children more disposed than others to the exercise of cruelty every one knows, and bodily pain to themselves is the most effectual means of rooting out the evil.

NEATNESS AND DISORDER

All children, no matter what their age or station, should be taught to do as much for themselves as possible, having it explained to them how much better and easier for them it is to be independent of another's help, besides rendering them so much more valuable to their friends. Specially should they early learn to be neat in their appearance, and orderly in their manners. They can dress themselves, and those younger than themselves, folding away their clothes as well as grown people can perform these duties for them, when properly and patiently taught the way. They will, moreover, be delighted to assist when

they find that their assistance is of importance, and is considered as such. Girls cannot too early be taught the value of knowing how to perform the customary duties in a household; they should have every opportunity afforded them of seeing them done, and of trying to do them. The lesson will be thus learned pleasantly, continuously, and thoroughly. Mothers will have housewives growing up around their firesides unawares.

Let little girls be allowed the tiny duties of dusting chair legs, etc., as a reward or a privilege. Every mother has of course the highest sincerest hope that her girls will be happy when "they grow up and marry." If her own married life is a happy one she will wish this, and if it is the reverse she will still more earnestly wish it. Mothers, then, can do a great deal towards their fortunate end, if they will commence from their earliest opportunities to insist on the habits of neatness and order in their small daughters' minds.

WASTEFUL CHILDREN

The habit of waste is a terrible sin. It is often not the children's fault they have it. Allowed to leave pieces of this, and pieces of that, they do not know that this constitutes waste; in fact they do not know what waste is. Wasteful boys and girls make improvident men and women.

PRAISING CHILDREN

All children are greatly susceptible to praise. Judiciously used it is a great key to their hearts. Praise whenever there is a loophole to do so. The system works wonders. But do not praise one at the expense of another or for the ridicule of another. The effect of the praise then is to make one feel himself superior to the other.

QUARRELLING

When children quarrel over their games, the very best remedy for such unpleasantness is to separate them. It is usually next to impossible to get at the actual pith of the dispute, each child generally being of the opinion that he or she is in the right. And as no parent, who is just, will exhibit the

least amount of partiality between children of one family, this will settle the question. It may be the right and wrong doer are equally punished, still the lesson will be a salutary one. They will learn to bear and forebear more.

WHEN TO COMMENCE

The exact period from when a child's education should be commenced must of course be decided by circumstances, some children being by health and mental attributes not fitted to learn lessons so soon as others. To be upon the safe side, therefore, parents should not begin with any of them too early.

Do not strain a child's mental powers in order to make it a kind of little wonder and infant prodigy. Instead of really laying a good foundation stone for education, this merely makes them precocious beyond their years, and precocity is very unendurable to people who like to see children as they ought to be, simple and childlike. It is doing the child itself a mental injury, it makes it old before its time.

Six years of age is quite young enough for a child to begin to learn its alphabet. Very likely it will know it before, picking it up; but it need not be taught before this. Such wise delay makes the teacher's task ten-fold easier; the child begins to understand what it is being instructed in. In its earlier days it does not understand the lesson. Slow children are not happy children.

When children are in training, however, let it be a punctual one, not lessons one day and holidays two days. In many systems of education there is too much work. The child learns from 9 till 12, and again from 2 till 4.30; and for children under ten this is enough. Over this age there may be an hour in the evening, or better still in the early morning. It is wrong to compel children to study much in the evening, poring over lessons after they have been hard at them all day.

When the tea hour is at five it will be nearly six before the meal is over, then there is the washing of the hands and face (never permit the omission of this either before or after a meal) and the children generally, and most naturally, expect to be allowed to play

now. And they should be so allowed, and lessons left till the morning.

CHEERFUL SCHOOLROOMS.

Education should be carried on, so far as children are concerned, whether great or small, in as pleasurable a manner as possible, and a schoolroom made pleasant.

LITTLE CHILDREN

Let it be done in as playful a manner as possible. Set the children to the table in high chairs and teach them with a pennyworth of beads and a box of lucifer matches with the brimstone heads cut off. They can be butchers, and bakers, etc., and you are the purchaser and the pieces of stick and the beads represent the tradesmen's wares. The pieces of stick will form all the letters of the alphabet in a rude fashion, and when paying for the purchases "twice one are two" is early learned. With older children the lessons at home can always have a little fun sprinkled amongst them. It is like the sugar in which the medicine is concealed, although it does not do away with it, it makes the potion more palatable.

PRAYERS

Prayers morning and evening are "good" for everybody, especially "good" are they for children, when the latter can understand them. Prayers read to children should have something in them to rivet their attention.

POCKET MONEY

All children should be allowed a little money to spend completely as they wish. Much of their disposition may be gathered from the way in which they spend their allowance. Teach them, whenever they wish to purchase an article, and have not money enough to do so, to wait until they can, and that to borrow is to put themselves in a dependent position. Check any symptoms of either of the two excessive faults of borrowing or lending in the bud. Generosity should be encouraged.

ETIQUETTE

INTRODUCTIONS

When introducing two men to each other the name of the inferior is mentioned first. By the inferior is meant the younger, the less important, or the one of lower rank. Supposing the social rank of both is equal and the age about the same, then the "introducer" should first name the one with whom he, or she, is most familiar. There may be counteracting circumstances, however, which would tend to reverse this order of things, but as a general rule the above holds good. Never introduce a lady to a gentleman; but always the gentleman to the lady. That is, mention the man's name first, addressing yourself to the woman—thus: "Allow me to introduce Mr. Smith, Miss Jones," or simply "Mr. Smith, Miss Jones." And follow this up by saying "Miss Jones," addressing Mr. Smith as you do so.

When introducing two women to each other the same rules apply as when introducing two men.

It is not usual for the persons introduced to one another to shake hands. A slight bow suffices, supplemented by as much of a smile as may seem appropriate, and, generally, a conventional "How do you do." A man, of course, always raises his hat when introduced to a woman. There are, however, exceptions to the rule with regard to handshaking, as in the case of a hostess who invariably shakes hands with her guests, whether she has met them before or not, or there may be other reasons why a handshake should be a natural and pleasing act under the circumstances, as when two people are introduced who, although they have never met before, have cause to feel a mutual friendliness and interest. But under any circumstances a man should never put out his hand in greeting until a lady extends hers; and the younger or less important person must always wait for

his, or her, superior to make the first advance.

It is bad manners to introduce people without permission. Nor must this permission be asked in the hearing of the second party. If Mr. A. desires to know Miss B., the lady's leave must be obtained before he can be presented to her. The only exception to this rule is at a dance, or social gathering, where introductions need not be regarded as leading to acquaintanceship. They are only for the occasion, and may be ignored next day.

CARDS

Visiting cards cannot be too plain. The size of a man's visiting card is exactly three inches by one and a half, and the pasteboard must be pure white and glossy. The size of a woman's is three and a half by two and a half inches. Married women have separate cards from those of their husbands.

A young unmarried girl who lives at home has no separate visiting card, but shares that of her mother, under whose name her own appears. But when the girl ceases to be exactly a girl, or strikes out a line of her own, with perhaps a perfectly different circle of acquaintances from that of her mother, or becomes a traveller, then she may use her own visiting card. Should she have no mother, her card would bear her own name, or, if she have sisters, it would read "The Misses" before the surname. Should an aunt or other female relative be living with and chaperoning her, the aunt's name would appear above that of the girls.

It is not considered good form to omit "Mr." or "Miss" upon a visiting card. Any one of sufficiently good social standing to use a visiting card must put some sort of indicatory title before the name. Cards should always bear the full and ceremonious title. Women cannot avail themselves

of any of their husbands' titles unless they proceed, not from an *office*, but from a *dignity*—such as a peerage, courtesy title, baronetcy, or knighthood—and therefore it is a solecism in etiquette to put on their cards, "Mrs. General A." or "Mrs. Admiral B." The wife of a general, or admiral, is simply Mrs. A. or Mrs. B.

It is incorrect to put on a card such terms as senior or junior. In order to distinguish between members of one family the christian name must be given, as Mr. Henry Smith or Mrs. Robert Jones.

The name occupies the centre of the card, and the address is in rather smaller characters in the left-hand corner. Sometimes the particulars of the "At Home" day are printed on the card; sometimes merely written.

Men's cards often have the name of their owner's club or clubs printed below their private address.

Should a man, or woman, have no permanent address, it is well to have only the name printed, filling in the address in pencil before leaving or presenting the card.

Visiting cards should be left in person or sent by a servant. They are only sent *by post* in very rare cases.

In making a call the visitor does not send in her card if her acquaintance should be at home, but only leaves it on departure, or if the friend is out. A married woman leaves two of her husband's cards with one of her own. Of the two, one is meant for the lady called upon, the other for her husband. Should the lady called upon be unmarried or a widow, the caller leaves only one of her husband's cards. Cards should either be given to the servant, if the lady of the house is out, or placed by the visitor on the hall table when leaving—no word is necessary. Guests should call and leave cards on their host and hostess within a week after a dinner-party or any other form of entertainment and hospitality.

When a man calls alone he leaves two cards, one for the ladies of the house and one for the gentleman or gentlemen.

In calling to inquire after the welfare of an invalid, or after the family has

suffered bereavement, cards are always left. Cards should be left after an invitation, whether the latter be accepted or not.

When a lady calls to inquire for another on the birth of a child she leaves her own card, but not her husband's.

When an invalid recovers she generally has cards printed thus: "Mrs. A. returns thanks for—" here follows a blank, where the inquirer's name may be written—"kind inquiries."

The same form of card is used to return thanks for cards of condolence left on the occurrence of a death, and these should not be sent out until the invalid or mourner desires to intimate that she is ready to receive her friends when they call, which those well acquainted will generally do after receiving one of the "return thanks" cards. These cards are always sent by post.

When making a purely business call, it is necessary to send in one's card by the servant, so that no mistake may occur over the name.

CALLING

First visits, that is to say, calls commencing an acquaintance, are always paid by the person of highest rank or social consideration, and it is a solecism in etiquette for the lower to make the first move. In the country, however, this rule may be disregarded, and old residents are at liberty to take the initiative and leave cards on any newcomer with whom they desire to be intimate. After cards have been left the person called upon should return the call within a week or ten days.

If, after a call has been made upon any lady, she returns it by merely leaving a card, it is generally understood to indicate that she does not wish to further the acquaintanceship; though there may be extenuating circumstances which occasioned the call being omitted.

In London, however, a *first visit* is usually accomplished by merely leaving cards, and when such is the case, it should be returned in similar fashion the ensuing day. If, however, a *call* is really made, that is, if the lady comes

inferior leaves it to them to originate subjects of conversation, and never introduces any topic of his own. Also, the sole exception to the rule of a hostess shaking hands with all her guests is when the latter are of royal blood, in which case the hostess waits for her royal guest to hold out his or her hand before she extends her own.

INVITATIONS

The usual length of invitation for a *Dinner Party* is three weeks, but this is by no means a fixed rule. In the height of the London season it may be abridged or extended, according to circumstances. Sometimes a hastily got up dinner is given for some one who is passing through London, or visiting some provincial town. At other times a distant date is fixed at a season when every one may be supposed to be fully engaged for weeks to come. There are two forms of invitation: the purely formal and the "friendly." The former is usually written on an invitation card, but not invariably so, while the latter is written on notepaper of the small size known to stationers as "invitation note." The card is worded as follows:—

A Formal Invitation.

*Mr. and Mrs. Brown
request the pleasure of
Mr. and Mrs. Green's
company to Dinner
on Tuesday, July 9, at 8 o'clock.
R.S.V.P.*

A Friendly Invitation.

DEAR MRS. GREEN,—Will you and Mr. Green give us the pleasure of your company at dinner on Tuesday, July 9, at eight o'clock?

Or:—

DEAR MRS. GREEN,—Will you and Mr. Green dine with us on Tuesday, July 9, at eight o'clock?

Replying to Invitations.—The mode of replying is regulated by that of the invitation. It would be a great mistake to answer a friendly note with a formal one, and replying to a formal card by a note is sometimes misunderstood.

If there are circumstances to be explained as to why the invitation cannot be accepted, it is sometimes well to write in the first person, but this only applies to particular instances. A short explanation can very well be couched in the third person, as:—"Mrs. Black regrets very much that she is unable to accept Mrs. Grey's kind invitation for the 9th, as she will not be in town." The formula "Owing to a previous engagement" has been so often used to convey studied incivility that a reason for declining an invitation has come to be considered almost a necessity, except in the most formal cases, or where the acquaintanceship is very slight.

The form of invitation cards varies slightly, but the simplest are those used by persons of the highest rank. The usual size is $4\frac{1}{2}$ by $3\frac{1}{2}$ inches, and the printed characters are copperplate. The lines run as follows:—

*Mr. and Mrs. Blank
request the pleasure of*

company at Dinner

on _____

_____ o'clock.

56, Highland Square. R.S.V.P.

No gilt edges, or crests, should appear on the cards.

Invitations to Weddings usually take the following form:—

*Mr. and Mrs. Jones
request the pleasure of
Mr. and Mrs. Robinson's
company at the
Marriage
of their daughter Geraldine and
Mr. Alfred Smith,
at
Saint Paul's, Knightsbridge,
on Thursday, June 30, at 2.30 p.m.,
and afterwards
at
200, Cadogan Place.*

Usually the whole of this is printed, with the exception of the names of the guests.

All answers to invitations should be framed as nearly as possible upon the lines of the invitations themselves. Thus, the correct reply to the above would be:—

"Mr. and Mrs. Robinson have much pleasure in accepting Mr. and Mrs. Jones' kind invitation to the marriage of their daughter on Thursday, June 30."

Should the invited guest intend to be present at the church, but not at the reception, he, or she, must convey as much in reply.

In declining an invitation it is not so necessary to specify day and hour as it is in accepting, the idea in doing so being to assure the host or hostess that the guest is quite clear on the matter of date and time.

Invitations to "At Homes."—These should be sent out a fortnight or three weeks before, and in the height of the season even longer. The usual form is a card measuring five inches by four, and reading as follows:—

Mrs. Caudley-Smith
At Home
Thursday, June 29,
4 till 7.
200, Ridley Square.
R.S.V.P.

The names of the invited persons are written at the top, above the "Mrs. Caudley-Smith." If the "At Home" is to be held at any other place than the residence of the hostess, the words explaining this appear under the line giving date and hour—"at the Grafton Galleries," for instance, and in this case it is usual to put "R.S.V.P. to 200, Ridley Square," or whatever the private address may be.

If any special entertainment is provided for the guests, they are apprised of it by a line in the lower right-hand corner: "Music," "Comédie Française," or the name of some fashionable reciter, singer, dramatic artist, etc., may occupy this position. If the performer be of very high distinction in his or her profession, the cards are sometimes worded—

"To meet Signor Sonofacio,"
or, "To meet Madame Delizia."

In the case of royalty or guests of very high rank this line is phrased—

"To have the honour of meeting
Their Royal Highnesses the Duke
and Duchess of Quelquechose."

Should the announcement be dancing, the hour when it is to begin is stated on the invitation, and is very often followed by the hour when carriages are to be ordered. As:—

"Dancing, 9.30;
Carriages, 4 o'clock."

An invited guest would reply to the above invitation, as follows:—

"Mr. Edward Morris has much pleasure in accepting Mrs. Caudley-Smith's kind invitation for Thursday, June 29."

It is a mistake to write, "Will have much pleasure in accepting."

It is permitted to send out invitations on folded notepaper, or in an ungummed envelope, with a half-penny stamp, since this plan in no way affects the convenience of the recipient.

An invitation to stay in a friend's house should always be explicit about the term of the visit, and the reply should be so worded as to convey to the hostess the visitor's acceptance of the same, including the date of its termination.

DINNERS

A dinner party should consist of an equal number of men and women, great care being taken that only those are invited who will be likely to prove congenial to one another.

A quarter of an hour's grace is always understood in dinner invitations. But it is always better to be too early than too late at a dinner.

Should a man be accompanied by a lady, he follows her to the drawing-room and she enters slightly in advance of him.

Guests advance at once to the host and hostess, who are always ready to greet them.

The host or hostess introduces each gentleman to the lady whom he is to take in to dinner.

When the move to the dining-room is made, the gentlemen offer to the ladies the arm which will place them on

the wall side of the staircase, thus avoiding the contact of their dresses with the balusters. But should the dining-room be, as it frequently is, on the same floor as the drawing-room, then the man's right arm is offered.

The host leads the way and takes in the lady of highest rank. The other guests follow in order of precedence, with the exception that the hostess *always goes in last with the gentleman of most importance*. The question of precedence is always a difficult one, and more so, in one sense, in middle-class society than in higher circles where there are regular degrees of rank. Therefore, all this should be arranged beforehand, and the places at table settled. Sometimes name-cards are used, but never in the best society. The host, who enters the dining-room first with the lady of highest social status, must be fully instructed as to the position of the guests, and the servants should also be told where each couple is to sit. As soon as a man is told where he is to sit he immediately takes his lady to the chair on the *right* of his own.

Men *do not* wear gloves at dinners. Women keep their gloves on until they are seated at the table. They are then taken off, and may or may not be resumed after dinner, though usually the left-hand glove is put on previous to hand-shakings and good-byes before the party breaks up. A flow of small talk must be kept up with one's partner during dinner—this does not mean that one's conversation must be entirely with one's particular partner—the conversation may become general, but a man's first duty is to the lady whom he took down to dinner.

The Various Courses.—The first thing to be done on sitting down to table is to unfold the table napkin and place it across the knee. The menu is then consulted and a mental note made of the dishes one intends to partake of.

There will probably be three or four wine-glasses on the guest's right-hand side. A long-stemmed, wide-cupped glass, or a small tumbler, is for champagne. The coloured glass is for hock, the slenderest and smallest for sherry, and the claret-glass occupies in

dimensions a midway between those of the champagne and sherry glass.

The tablespoon is for soup, which must be eaten from the side of the spoon close to the point. The fish-knife and fork are placed outside the others and are of silver.

The dishes are usually all handed round at dinner-parties, the carving being done at the sideboard or in an adjoining room, but sometimes the host carves the joint and game. When offered the usual choice the guest must decide at once and indicate his choice without delay.

When asked to choose a wine a guest may either mention which he desires, or slightly draw the proper glass forward.

An occasional "Thanks" to the servant is not amiss.

As the dishes are not named when they are handed round it is necessary to study the menu in order to know what they are. The viands must never be chosen as a topic of conversation.

The wine-glass is never drained at a draught; nor is it considered polite to eat very quickly. The knife, fork, and spoon should be handled as noiselessly as possible. Scraping the edge of the knife against the plate is unpardonable. In sending a plate away to be replenished, the diner leaves his knife and fork or his spoon, as the case may be, upon it. Bread must be broken with the fingers, and not touched with the knife or fork.

The mouth must be closed while mastication is going on.

Never speak while food is in the mouth and never drink until it is quite empty.

The correct way to eat curry is with a spoon and fork; but this is the only meat dish that is eaten in this way. Sweetbreads and many other entrées are eaten with the fork alone. It is then held in the right hand. Should a knife be found necessary it can, of course, be used.

Vegetable entrées are always eaten with a fork, held in the right hand.

Fish is eaten with a silver knife and fork. Sauces should not be taken very plentifully.

Bread, biscuits, olives, asparagus, celery, and bonbons are the forms of

food that may be touched with the fingers.

In helping oneself to salad, it should be placed on the crescent-shaped plate laid down for that purpose before it is handed round. This plate is put at the left side of the round plate. Both knife and fork are often used for salads, but if they are sent to table as they should be, with the lettuce and other vegetables broken. small, the fork is quite sufficient. It is best to avoid using a steel knife with vinegar, whenever possible.

Oysters served on the shell are eaten with a fish knife and fork. Other fish "hors d'œuvres" are eaten with a fish-fork, also fish rissoles.

It is a safe rule never to use either knife or spoon if the fork will do.

With ice-pudding or ices in any form a small spoon is used.

With soup small addenda, such as fried bread-crumbs, or croutons, are often handed, and the guest helps himself to these with the spoon handed round on the dish.

It is not necessary to wait till every one is served before beginning to eat. Begin directly the food is placed before you.

The soup-plate, if tilted at all, should be raised at the side nearest the eater, so that the soup collects at the furthest point from him.

Soup is never helped twice, nor is fish. Therefore, when the servants asks a diner if he will have any more he must always reply in the negative.

Bread is always eaten with fish.

Very few diners work straight through a menu without omitting some dishes. No one is expected to take of all, though it is quite permissible to do so.

Dishes are presented at the left side of the diner, and he helps himself with his right hand, or with both hands, if necessary.

When slices from a joint, or game, or poultry are handed round, the vegetables, gravies and sauces accompanying them are handed after. It is usual to wait for these etceteras before beginning upon the meat, fowl, or game.

Cheese is handed round on a dish or

plate with the pieces cut ready to one's hand. The diner helps himself with the knife laid ready beside the pieces of cheese, not with his own knife. If watercress is handed round it is taken up in the fingers and eaten in the same way. Cheese should be cut in small pieces and conveyed to the mouth on a piece of bread or biscuit. Savouries are handed round with the cheese course and should be eaten with a fork. Even a cheese fondu is eaten with a fork. Asparagus is eaten with the fingers, but if very soft and unmanageable a fork may be used, but never a knife.

Cheese straws are eaten with the fingers.

With regard to sweets, it is a safe rule to use the fork only, when it suffices for the work in hand. With tarts, as a rule, both spoon and fork are necessary, especially when there is syrup.

After the cheese course the dessert-plate, with its d'oyley, finger-glass, and silver knife and fork is set before each diner. Before the ices or dessert are handed round one must place the dessert-knife and fork at right and left respectively, of one's plate, and, taking up the finger-glass carefully in one hand, with the other place the d'oyley on the cloth to the left of one's plate, then setting the finger-glass down upon it. Many people make no use of the finger-glass, but, should the fingers require it, just moisten the tips and dry them on one's table-napkin.

Grapes are taken up singly with the fingers, and the skin and seeds must be expelled from the mouth as unobtrusively as possible. To do this the hand is used, the forefinger being curved above the mouth in a manner which serves to conceal the ejection, and the skin and seeds are in this way conveyed to the plate, the fingers afterwards wiped with the napkin.

Bananas are peeled with the knife and fork and the pieces are conveyed to the mouth by means of the fork.

Oranges are cut in two, then in four, and with the aid of knife and fork the contents of each section are extracted in two or more parts, and carried to the lips on the fork.

Apples and pears are peeled with the

knife and fork ; peaches, apricots, and nectarines in the same way.

Strawberries are taken by the stem, dipped in sugar and cream, and carried to the lips with the fingers. If the fruit has been picked free of husks and stem, it may be bruised on the plate with sugar and cream, and eaten with a spoon.

Preserved ginger is eaten with the knife and fork.

A spoon is necessary with pines, melons, and very juicy strawberries, after they have been prepared with the knife and fork.

Nuts are cracked with the nut-crackers, and then extracted by the fingers. With filberts and Brazil nuts the knife and fork are called into requisition in order to free them from skin, but walnuts are too intricate for anything but the human hand.

Almonds are never sent to table in their shells, and are usually accompanied by raisins, which, like the almonds, are carried to the mouth in the fingers.

Crystallized fruits are cut with the knife and fork, unless they happen to be of a small size, such as cherries. In that case they are eaten whole, being carried to the lips on the fork.

Liqueurs are handed round at dessert, poured out ready into the small glasses that are called after them. The servants often leave the dining-room when the dessert is placed on the table, and when this is so, the wine is passed round from hand to hand, each gentleman attending first to the lady he has escorted and then helping himself before passing on the decanter, claret-jug, or champagne bottle. It is no longer the custom to drink-wine with one's guests, or they with each other.

There is nothing singular in drinking nothing but water, and should any one prefer water he, or she, asks for it when the servants offer him, or her wine. Apollinaris or distilled or soda-water may then be offered and can be chosen in preference to plain water.

The signal to leave the table is given in the merest nod or smile from the hostess to the lady who has been taken down to dinner by the host. The latter then rises from her seat, all

other ladies following her example. They then leave the dining-room in the same order in which they entered it, first the lady of highest rank, and the hostess last.

When the ladies rise to leave the room, the gentleman who sits nearest the door opens it for them, and stands beside it until they have all passed through, when he closes it after them.

After they have smoked the men join the ladies in the drawing-room, the man of highest position leaving the dining-room first, the host last.

Tea is then carried round in the drawing-room, and the gentlemen take the empty cups from the ladies and put them down in some safe place.

It is usual for the elders of the party to make the first move towards departure. No one leaves after a dinner party without saying "Good-night" to his host and hostess.

Menus.—The various courses of a dinner come in the following order :—

Hors d'œuvres.

Soup.

Fish.

Entrées.

Sweets.

Cheese and Savouries.

Dessert. Ices.

Wines are handed round as follows :—

Sherry.

Claret and Hock.

Champagne.

Liqueurs. Port.

LUNCHEONS

Luncheon is a comparatively informal meal. It is usual to arrive a few minutes before the appointed time. The hostess, however, never waits for luncheon guests. Gloves should be removed at the table, but women's out-door garments are kept on, unless the room should be so warm as to make the coat very oppressive.

The guests do not pair off, as at dinner, but on the meal being announced, the host, if there be one, would open the door for the ladies, who would go downstairs, followed by the hostess, the gentlemen behind her. Very often the master of the house is absent at luncheon, in which case the hostess would rise, and, addressing

her principal guest, would propose to her to lead the way. "Shall we go down to lunch, Mrs. So-and-so?" would be sufficient. The other ladies would refrain from preceding those of higher position, and the hostess would always be the last lady to leave the drawing-room. The guests sit down to table where they please, the host or hostess sometimes making a suggestion on the matter.

At the conclusion of the meal the hostess gives the signal to the lady of highest rank and they proceed to the drawing-room, the gentleman nearest the door opening it for them to pass through. If the host be present the gentlemen remain behind with him, till he proposes an adjournment; but if he be absent the gentlemen follow the ladies at once.

A quarter of an hour or twenty minutes later guests make their adieux.

When invited to lunch men should leave their hats and overcoats in the hall.

AFTERNOON TEAS

Women do not remove any of their out-door garments for five o'clock tea—not even gloves, unless quite necessary.

When men are present they have to carry the teacups about, hand sugar, cream, cakes or muffins, and make themselves as useful and amusing as possible. They must rise every time a lady enters or leaves the room, opening the door for her exit, and, if the hostess requests them, they must see the lady downstairs to her carriage. With regard to the viands, a man helps himself, but not till he has seen that all the ladies in his vicinity have everything they can possibly want. His hostess, or whoever is presiding at the tea-table, gives him tea or coffee, and he adds sugar and cream.

AT HOMES

Gatherings of almost every social description are called "At Homes," with the exception of a dinner. There are dancing "At Homes," musical "At Homes," and conversational "At Homes," and any of these may take place in the afternoon, or evening, as the case may be.

When the "At Home" is held in the afternoon, whether the invitation be for music, recitations, or simply for conversation, the guests retain their hats during their stay. The cloak or outer wrap may be left in the charge of the servant, who takes it from the guest in the hall.

Refreshments, at ceremonious "At Homes," are served in the dining-room, whither the guests repair during the intervals of music, recitations, or the dramatic entertainment.

Introductions are far from being general on such occasions. The hostess must be guided by tact and discretion in such matters.

BALLS

Balls may be divided into three classes—public, private, and fancy dress; the last of which may be either public or private.

Public Balls are of various kinds, some being given to subserve local charities or other purposes, and others having no *raison d'être* except that of enabling an evening to be pleasantly spent. Those of the former character are often under the auspices of several lady patronesses, and in any case stewards are appointed, who usually superintend the sale of the tickets to eligible persons, and act as masters of the ceremonies at the ball. There they arrange introductions and superintend the dancing. They are generally distinguished either by a small rosette or piece of ribbon in the button-hole. Public balls generally commence about 11 p.m., and conclude about 4 o'clock next morning.

If a man is a stranger he should apply to the stewards, or the master of the ceremonies, for a partner, indicating as quietly as possible any young lady with whom he would like to dance. Then, if there be no obvious inequality of rank, he will be presented for that purpose. A man should never on any account go to a strange lady by himself and request her to dance, or she will unhesitatingly "decline the honour" and think him an ill-mannered fellow.

Any presentation to a lady in a public ball-room for the mere purpose of dancing does not entitle a man to claim her acquaintance afterwards;

therefore, should he meet her in the street he does not raise his hat—unless, of course, she first bows.

When a gentleman takes a lady with him to a public ball, he leads her at once to a seat.

Private Balls.—It is always the lady of the house who is considered to give the ball; she therefore sends out the invitations and to her the replies are addressed. Those accepting should reply briefly within a couple of days. Verbal invitations or replies are never given. Guests are announced by name as they reach the door of the ball-room.

The lady of the house should be near the entrance to the ball-room in readiness to receive her guests. When the latter enter the room their first care should be to find their hostess and make their obeisance.

Introductions are made either by the hostess or one of the family, all of whom should exert themselves to secure the pleasure of their guests. Upon the sons and daughters especially, the duty of seeing that guests have facilities for dancing is imperative; the former by asking ladies who may seem to have been overlooked, the latter by refusing no partner, unless previously engaged.

It is bad manners to go to any ball unless one can dance well. Hostesses sometimes make special introductions for the "supper" dance, the one immediately preceding that meal. This means that the man introduced, unless engaged to dance it with some one else, is imperatively called upon to accept the partner offered him and take her down to supper.

At all Balls.—Guests generally receive a programme, which is a card of the dances in their order, with corresponding blank lines upon which the names of partners should be written. Women do not as a rule write upon their programmes, the men putting their names against the dances given them, on the ladies' cards, and then putting the ladies' name against the corresponding dances on their own.

In asking a lady to dance it is usual to say, "Will you give me this waltz?" or, "May I have this barn-dance?" or, "Are you engaged for every dance, Miss Smith? Can you spare me one?"

When asked for a dance a woman examines her programme. Her would-be partner will probably hold out his hand for it, but should she prefer not to show it to him, she may quietly but firmly retain it, and herself inscribe his name or initials opposite the number arranged for. The more usual way is to hand him the card for examination, when he will write his own name after obtaining permission to do so.

When this ceremony is performed the man bows, the woman gives him a little inclination of the head. Hand shakes are never exchanged, except under very special circumstances, such as meeting a long-talked-of relative of some very intimate friend. The lady rises from her seat when her partner is ready, a condition which he betokens by offering his arm. After the dance there is generally a short stroll about the room, or an invitation to visit the refreshment buffet and have some wine or lemonade. Then the man takes his partner, if she is a girl, back to her chaperon.

A chivalrous man will not fail to lead out ladies who appear to be neglected by others—but he will not do it ostentatiously.

A gentleman, when dancing with a lady, should pay almost exclusive attention to her. When the dance is over, and the partner left with her friends, the man says, "Thank you," bows, and leaves her. If he wishes to see any lady to her carriage, he asks her permission to do so, folds her wraps around her, hands her in, and stands until the carriage has gone some yards away.

WEDDINGS

Wedding receptions are now frequently held at a restaurant or at an hotel, instead of at the home of the bride. The mother of the bride has to arrange in what order the house-party has to be sent to church; who is to go in the carriage with whom; who is to lead whom up the aisle, and what change of partners is to be made in returning. She has to remember the claims of everybody in the matter of precedence, to remind her husband that, though he has to take his daughter

up the aisle, it is his duty to bring her, by that time, formally constituted mother-in-law down it; while she herself, accompanying her daughter to church and immediately preceding her up the aisle, has to be brought down again by the bride's father-in-law. It is these two couples who drive off from the church immediately after the bride and bridegroom, whose carriage is called up by the best man directly the signatures are all written in the vestry. It is usual for the bride's family to have several carriages in addition to the one for the bride's use in going to church. At one time grey horses were considered indispensable for the bride's carriage, but now it is thought better taste to have brown or bay, as a smart pair of greys has been found to attract undesirable notice.

Bridesmaids usually consist of the sisters of the bride and bridegroom, and the special friend of the bride, but very often children are chosen to play the part of bridesmaids.

The left side of the church is generally reserved for the bride's relations and friends—the left side, that is, as one enters it from the principal door—and the right side for the bridegroom's friends.

In the vestry it is usual to ask the persons of the highest rank present to sign the register. Their signatures would follow those of the bride, bridegroom and their fathers. It should be all settled beforehand as to what persons should be asked to sign, as it is easy to give offence by omitting some one who might resent not being invited to append his signature.

Should the bride have no father to give her away this duty is performed by a near relative; the latter then leads the bridegroom's mother down the church after the ceremony, followed by the bride's mother and bridegroom's father.

It is the custom for a bridegroom to completely furnish the house in which the newly-married couple intend to live. The bride's only expenses are her trousseau and some wedding present to her bridegroom. The latter has to give all the bridesmaids a present, as well as their bouquets. He also gives the bride her bouquet,

and often her mother one too. The bride gives presents to her pages, if she has any, and her father pays for the floral decoration of the church, the music, etc., and everything connected with the wedding day until his daughter leaves for her honeymoon.

At the Church.—The "best man" has to take charge of the ring, and accompany the bridegroom to the church; he has also to present the clergyman with his fee, and the clerk and underlings with their *douceurs*. These fees have been previously given him by the bridegroom to hand over.

The bridegroom and his "best man" usually arrive early at the Church, and await the others in the vestry, when the latter often settles the fees before the ceremony. The invited guests come next. Then the bridegroom and the "best man" take their places near the altar. The bride is the last to arrive.

During the ceremony the "best man" stands on the bridegroom's right hand, but slightly back.

Leaning on the *right* arm of her father, or whoever is to give her away, the bride passes through the double line of bridesmaids, who close up behind her in order of pre-arranged precedence, to the altar, where she meets (for the first time that day) her future husband, and takes her position at his *left* hand, with her father at her left hand. Her mother and married sisters dispose themselves near the latter, and the bridesmaids behind the bride in order, the head bridesmaid being nearest. The latter should be in readiness to hold the bouquet, gloves, etc. At the conclusion of the service the bride takes the bridegroom's left arm and follows the clergyman to the vestry, the bridesmaids, "best man," and others, coming after. Here the register is signed, and good wishes offered to the bride. It may be mentioned that congratulations should only be offered to the bridegroom, while the bride is wished every happiness, etc.

The "best man" usually hands the certificate to the bride.

The newly-married pair then slowly leave the church arm-in-arm for their carriage, and the others follow according to pre-arrangement.

The bride and bridegroom naturally occupy the first carriage, the bridesmaids following. After these come the parents of the bride and bridegroom and the other guests according to order of precedence.

It may be mentioned that a bride takes precedence of everybody, even Royalty coming after the happy pair as they leave the Church.

At the Reception.—The guests, on reaching the house after the ceremony, immediately go up to the bride and groom to offer congratulations and good wishes, afterwards paying their respects to the hostess and host.

The etiquette of wedding breakfasts varies considerably. Thus there are sitting-down breakfasts and standing-up breakfasts, either being equally correct. The "breakfast" is more properly a luncheon, as soup, entrées, game, etc., may be provided, and champagne often supplies the place of coffee and tea, which do not appear. Towards the conclusion of the meal, the bride, assisted by the bridegroom, takes a knife and makes a cut into the bride-cake, which has been placed before her. This is then handed round and every one is expected to taste it. The bride's father sometimes proposes the health of the happy pair, the bridegroom responds and proposes the health of the bridesmaids, to which toast his "best man" replies. The bridegroom may then propose the health of his wife's parents, and other toasts follow. But toasts and speeches are a matter of taste and are very often dispensed with. Also afternoon receptions often take the place of sit-down breakfasts. At these "receptions" a wedding-tea is usually given. But whatever form the meal takes champagne should form part of the refreshment. The food is usually always cold, with the exception of soup at a breakfast. All wedding menus are printed in silver. The bride retains her bridal costume during the breakfast, and when every compliment and kind wish has been proffered and acknowledged, she withdraws, attended by her maids, and exchanges her bridal dress for a travelling costume.

Bride and bridegroom then make their adieux and proceed to the

carriage, which is to take them to the station. Directly they have gone it is the business of every one else to go too.

The Presents.—Every one who is invited to a wedding should send a present. The most usual time for sending such is about a fortnight before the day. In arranging the presents for one's friends to see them, it is usual to have a card with each, on which the donor's name is distinctly written.

It is part of the numerous onerous duties of the hostess to see that each guest is invited to go and look at the presents.

A considerable amount of tact is needed in arranging the gifts. The disposition of them should be such that not even the smallest can be overlooked.

DUTIES OF GUESTS

It is never wise to volunteer a visit to a friend's house unless one has what is called a "standing invitation," with every reason to believe that it was sincerely and cordially given. Many invitations are mere "words of course," designed only to make a show of politeness, and not to be taken literally, or ever acted upon.

Even when one is quite certain the invitations is really meant, it is always best to apprise one's friend duly of the exact day and hour she may expect you; always with the proviso if it be convenient to herself to receive you at that time, and desiring her to let you know candidly if it is not.

However close your intimacy, an unexpected arrival may possibly produce inconvenience to your hostess. The time of arrival should be intimated and observed as punctually as possible.

Having received an invitation, reply to it immediately; and do not keep your friends waiting, day after day, in uncertainty whether you mean to accept or decline.

When you arrive take occasion to mention how long you intend to stay, that your hostess may plan her arrangements accordingly. It is rude and inconsiderate to keep her in ignorance of the probable duration of your visit. And when the allotted time has expired, do not be persuaded to

extend it further unless you are earnestly and with undoubted sincerity invited to do so. It is much better that your friends should part with you reluctantly than you should give them reason to wish your visit shorter.

On your first evening inquire the hours of the house, that you may always be ready to comply with them. Rise early enough to be dressed in time for breakfast; but if you are ready too soon, remain in your own room, or walk about the garden, or go to the library, till the cleaning or arranging of the breakfast-room has been completed. Notwithstanding all that may be said to you about "making yourself perfectly at home" and considering your friend's house as your own, be very careful not to do so literally.

Avoid encroaching unreasonably upon your friend's time. Do not expect her to devote an undue portion of it to you. Amuse yourself with some occupation of your own when you see she is engaged.

It is as well to retire to your own room in the afternoon for an hour or so, that you may give your friends an opportunity of taking a nap or resting alone.

It is an advantage to be able to entertain your entertainers. A silent visitor, whether silent from dullness or indolence, or a habit of taciturnity, is never an agreeable one. Yet, however pleasant the conversation, have sufficient self-denial to break off in reasonable time, so as not to keep the family up by continuing in the drawing-room till a late hour.

While you are a guest at the house of a friend do not pass too much of your time in visiting at other houses unless she is with you.

While a guest yourself it is taking an unwarrantable liberty to invite any of your friends and relatives to come there and visit you.

Refrain from visiting any person with whom your hostess is not upon good terms, even if that person has been one of your intimate friends.

When called on by any of your own acquaintances they will not expect you to ask them to stay to tea, or dinner. That is the business of your

hostess, not yours. It is customary for visitors to settle their own laundry bills.

Take with you a small writing-case, containing whatever stationery you may be likely to want during your visit including postage stamps. Thus you will spare yourself and the family the inconvenience of applying to them whenever you have occasion for pen, ink, paper, etc. Also take care to be well provided with all sorts of sewing requisites.

Be obliging and willing to help your hostess, without being officious—there is no greater bore in a house than an officious man or woman. Be content to be fairly comfortable without seizing upon the best of everything or ostentatiously effacing yourself, the two extremes of bad manners in guests. While you are a guest those friends who write to you should acknowledge the existence of your host, or hostess, by putting his or her name under your own on the envelopes of your letters.

Always remember that hospitality prevents a hostess from speaking openly of her own likes and dislikes, lest the knowledge of them might interfere with the enjoyment of her guests. Therefore, the visitor should be on the look-out for the least sign of disinclination or otherwise, in order to be guided as to the wishes of her entertainer. At the same time, when a guest is asked what he, or she, would prefer doing it would be a great comfort to the hostess if they would only answer definitely that they would like to walk, or drive, as the case might be, instead of which they all profess their readiness to do what *she* likes, while she only wants to do what *they* like.

A guest should be very particular in conforming to all the rules of the house. If smoking is objected to in the bedrooms it is the height of bad taste to light a cigar. If such restrictions annoy guests they should remember that they need not have come if they had not chosen, and need not accept another invitation to the same house.

When the hostess thinks it time to retire for the night she usually asks the lady of the highest rank if she is

willing to do so, and it would be ill-manners if the latter did not at once accede.

Don't contradict your hostess or the other guests, and don't make unpleasant remarks such as "Dear me! You *have* changed since I saw you last!"

Don't be a mischief-maker.

On concluding your visit tell your entertainers that it has been pleasant, and express your gratitude for the kindness you have received from them, and the hope that they will give you an opportunity of returning their hospitality.

Give a parting gratuity to each of the servants, the sum being according to your means and the length of your visit.

After reaching home write, within two or three days, to the friend at whose house you have been staying, telling her of your journey, etc., and allude to your visit as having been very agreeable.

The visit over, be careful not to repeat anything that has come to your knowledge which your late entertainers would wish to remain unknown. Having been their guest and partaker of their hospitality, you are bound in honour to keep silent on every topic that might annoy or injure them, if repeated.

TIPS TO SERVANTS

If a man takes his own valet with him when visiting he need not then tip the butler or footman; five shillings to the coachman and half-a-crown to the upper housemaid would be all that is necessary for a short visit.

If he has been shooting, however, a serious item arises in the form of the gamekeepers, who may be paid anything from ten shillings to five pounds.

If a man is valeted by the butler or any other manservant, he should give him from five shillings to a pound, according to the services rendered him.

A young girl is not expected to give so much as a married woman. The amounts vary according to the social position of the hostess, rather than of the guest, in ordinary circumstances. In houses belonging to persons of wealth the half-sovereign will be

found a useful coin after a visit of a fortnight or so, but in the case of a week-end visit a little silver is adequate to the occasion.

Should the guest ride much the groom should not be forgotten; and if her steed be an iron one the stable-boy who cleans it and polishes it is worthy of a dole.

If the guest avail herself of the services of her hostess's lady's-maid, the latter will expect a gift.

The coachman who drives her to the station also deserves notice.

The butler who supervises the transport of her luggage from upstairs to the hall cannot be overlooked any more than the housemaid who unstraps her boxes and helps her to lock and strap them up.

OUTDOOR FUNCTIONS

Garden parties may be held in the afternoon, from half-past three, or four, to seven o'clock; or they may be in the evening from nine to twelve—in town, they are invariably confined to the afternoon.

These entertainments are among the few afternoon functions at which the host is expected to put in an appearance, if it be at all within the bounds of possibility; and, whenever practicable, gentlemen should avail themselves of invitations to these gatherings.

Guests should arrive soon after the hour named on the invitation card, and should remain longer than an ordinary "call" would require. The host and hostess shake hands with all arrivals, and introduce guests to one another where they think it will be mutually acceptable.

It is quite permissible for guests to address each other without being introduced, but any slight acquaintance formed under such circumstances may be ignored afterwards if desired.

There is no stipulated order of procedure at a garden party. When lawn tennis or croquet is to be one of the items of the afternoon's entertainment it is always stated in the corner of the invitation card, and tennis players come provided with racquets and shoes.

In the country music is often one of the attractions. If a military band is

within reach, the host should open negotiations by first obtaining the permission of the colonel of the regiment, and then making all other arrangements with the bandmaster.

Where the grounds are spacious, and there are conservatories through which the guests may wander at their own sweet wills, and a lake or river upon which they can row about, there will be little more needed by way of entertainment beyond dainty refreshments and—fine weather!

Plenty of chairs and small tables, and seats of various kinds, should be freely scattered about the grounds; and the lighter refreshments, such as strawberries and cream and iced drinks, may be served in the open air. It is more usual to have the bulk of the refreshments laid indoors, in case the weather should suddenly prove unpropitious. Guests can then adjourn into one of the cool reception rooms for their tea and sandwiches, or the gentlemen can bring them out as required on to the lawn. Sometimes a tent is erected for this purpose, but this is seldom satisfactory, the inside of a marquee being often very airless and oppressive on a warm day.

An evening garden party requires that the ladies shall be in the smart dress that they would wear at an afternoon "at home," and not in evening dress, which is a most risky form of attire for outdoor wear at night, but men must appear in the orthodox evening dress, wearing a light overcoat, if they wish. In all other respects an evening garden party is very similar to an afternoon affair, except that the grounds should be lit up by coloured lanterns and lamps. Sometimes there is a little dancing. Should the weather turn out to be unfavourable, provision must be made for the guests indoors, the entertainment then taking the form of an ordinary "At Home."

Guests greet the host and hostess on arrival, and when they leave.

Picnics will always hold a place in society recreations. The most enjoyable method of giving a picnic is to order conveyances, and drive to some reliable hotel, where a sumptuous repast has been previously ordered,

after which the guests are free to wander about and see the sights and beauties of the district.

A less expensive way is for the party to take its own provisions, when the ladies make themselves entirely responsible for the eatables, and all necessary details are arranged by the hostess. In such cases the men should settle the matter of conveyances, but all this will, of course, depend upon the nature of the entertainment and the worldly wealth of the host.

The best "etiquette" to be observed at a picnic is never to lose one's head and one's temper. To be able to face an unexpected accident or catastrophe calmly, and laugh away even so dampening a disaster as a sudden thunderstorm. Water parties are much the same as picnics.

ON THE RIVER

Boats coming down with the tide keep the middle of the river; those going against it hug the shore on either side, but in passing other boats coming in the same direction they must go in a semicircle, leaving the front boat the shore. Tow-boats are always given this advantage. In meeting other boats coming down-stream which really have no right to the shore, but are mistakenly kept near the margin by inexperienced steerers, the boat going up-stream should not go out, but keep towards the land. The rights of anglers should be respected, and it is not only courteous but politic to do so, as it is disagreeable to have the lines entangled in the boat. Row-boats give way to sailing-boats on the river, especially when the latter are tacking to use the breeze. As to steam-launches, their motto often appears to be that, "Might is right." Occupants of small boats should keep a sharp look-out for these. In passing through the locks the usual politeness of refraining from shooting ahead of boats in front should be observed. Any active emulation of this kind is a very risky business in the same way when pulling a boat over the rollers. A man is bound to yield the pass to ladies or to any boat containing ladies.

IN THE STREET

When three people are walking

together, it is better for one to keep a little in advance of the other two, than for all three to persist in maintaining one unbroken line. They cannot all join in conversation without talking across each other, and this is always awkward and should be avoided. Also three people walking abreast occupy too much of the pavement and incommode other pedestrians.

When meeting servants, or others inferior in station, always recognize them. To pass without doing so is rude and unfeeling.

If you stop a few minutes in the street to talk to an acquaintance, draw to one side of the pavement, near the wall, so as not to impede the passers, or you may turn and walk with your friend a little way. Never stop to talk in the middle of a crossing.

To speak loudly in the street is ill-bred, and to call across the road to an acquaintance is in execrable taste.

If you are compelled to detain a friend when he, or she, is walking with a stranger, briefly but politely apologize to the stranger, and keep no one waiting longer than absolute necessity requires. When thus circumstanced yourself, respond cheerfully and courteously to the apologetic phrase offered, and, drawing aside, occupy yourself with anything but the private conversation that interrupts your walk. Sometimes circumstances render it decorous to pass on with some courteous phrase, step into some neighbouring bookseller's, etc., or make a rapid appointment for a reunion with your friend. It is desirable to cultivate the quick discernment and ready tact which will engender ease of manner under those and similar circumstances requiring prompt action. A friend should never be left suddenly in the street without an apology. If occasion demands your remaining stationary upon the steps or in the portico of a public building, make room at once for others who may be entering, and avoid any appearance of curiosity regarding them.

Never stare at other people in the street and make no comment, even of a complimentary nature, in a voice that can possibly reach their ears.

AT CHURCH

When at church, simple good taste will dictate the most quiet and unnoticeable bearing. Let us say, with Mrs. Chapone, that "it is part of our religion not to disturb the religion of others."

To enter early enough to be well-seated before the service commences, to attend politely, but very unostentatiously, to the little courtesies that may render others comfortable, to avoid all rude staring, and all appearance of inattention to the proper occupations of the occasion, as well as every semblance of irreverence, will occur to all well-bred people as obviously required by decorum. When, however, late in reaching church, one should endeavour to disturb others as little as possible.

A man should remove his hat in the vestibule, and on no account resume it until he returns thither, unless health imperatively demands his doing so just before reaching the door opening into it.

All nodding, whispering, and exchanging of glances in church is in bad taste.

Salutations with friends should always be very quietly exchanged while one is still within the body of the sacred edifice.

It is always proper when compelled to hurry past those of right before you at church, as elsewhere, to apologize briefly but politely for doing so. In visiting a church of a different denomination from your own, comply as far as you can with all the ceremonies observed by the congregation, even if some of these observances are not in the least in conformity with your own opinions and feelings. Never show any marked disapproval of the mode of worship, and if you find it irksome to refrain it is best to leave the church, or not go again.

TRAVELLING

When travelling make as little commotion and fuss as possible. Decide calmly where you wish to go, and let your arrangements be made as quickly and effectively as practicable.

If you are going to Paris, pack up and go quietly away—without taking

leave of your friends as though you were about to leave to settle in New Zealand.

When travelling it is odious to be perpetually instituting comparisons. It is disrespectful to those with whom you may be temporarily thrown.

Nothing can be in worse taste than to allude to victories obtained by the troops of your own country over those of the foreigner, no matter how ancient a matter of history it may be. Neither should any reference be made to the superiority of British diplomacy over that of all other countries.

It is peculiarly objectionable to treat the religious service of another country as a show, the sight of which ought not to be missed. A man should never fail to remove his hat when entering *any* place of worship, and no well-bred man or woman will chatter aloud while a service is proceeding. It is extremely bad taste to comment loudly and unfavourably, in English, upon the ways and customs of a foreign country, and assume that the natives do not understand what is being said, because in all probability they do.

A CHRISTENING

If the infant is a boy, he has two godfathers and one godmother; if a girl, two godmothers and one godfather. They are generally chosen from relatives or parents of the child. In the christening ceremony the infant should be held by the godmother during the first part of the service, giving it to the clergyman on his left arm when he is ready to receive it. After the baptism, the nurse takes the child from the godmother.

A present, in accordance with rank, is generally given to the infant by the godparents. The nurse likewise should be presented with a suitable gift by the near relatives of the baby.

A FUNERAL

The funeral arrangements are usually left in a great measure to the undertaker, but care should be taken that everything be quiet and void of senseless parade.

The relatives and friends invited arrive at the house at the time appointed, and are assembled in the

library, or other suitable room. The undertaker acts somewhat as a master of the ceremonies, indicating the order in which the guests should proceed to the carriages, etc. Ladies do not usually attend funerals, though there are exceptions to the rule.

In the order of procession, both to the church or cemetery and in the ground, the nearest relative follows next the hearse or the coffin, and the others according to their nearness of kindred to the deceased. The empty broughams, etc., of acquaintances, sent out of compliment, come last in the *cortège*.

Arrived at the church, the coffin is carried in and placed in the chancel, where also the mourners have seats allotted to them. When the first part of the solemn ceremony is over, the clergyman leads the way towards the grave, followed by all the mourners in order, who group themselves round the grave, the principal mourner standing at its head.

After the service no order of proceeding is formed, the chief mourner and family representative follows the clergyman to the vestry to supply the facts relative to the deceased necessary for registration, and to pay the fees.

It is scarcely necessary to add that black only should be worn on these occasions.

IN THE STREET (MEN)

When walking with a lady a man should always keep upon the kerb side of the pavement.

The rule of the road for pedestrians is "keep to the right." This may sometimes become slightly complicated in the case of a man walking with a lady and having to pass other people. He may either keep by his companion's side, or go out into the road, and must judge for himself which course is advisable. In doing so he must always remember that his first duty is to his companion, and he should remain at her side if possible. This, however, need not make him wanting in courtesy to other women, and his behaviour should never involve any inconvenience to those who may be passing. Rather than this should be so he must give up his position and go out into the

road till the latter have passed in comfort. But should the passers-by be men, no such consideration is necessary, and the escort must remain close by his lady's side. In crowded streets he may have to fall behind, but he should never allow any one to interpose between her and him.

Whistling and singing are incompatible with the conduct of a gentleman in the street, though this by no means applies to a quiet country road, where ceremonious bearing is not required.

It is not permitted to have the hands in the pockets when walking in the park, or the streets of a town.

SALUTATIONS

When walking alone, or with others of his own sex, a man need only acknowledge passing male friends by a nod, unless the age or position of the passer-by should render it advisable to raise the hat. But should a lady be with the acquaintance, any man meeting them must always raise his hat. So must the individual walking with the lady.

The right of acknowledgment rests with the lady, therefore a man must always wait for a woman to bow before raising his hat to her. He should also always wait for acknowledgment on the part of those male acquaintances who are his superiors in age or position. This does not mean that he is to look away from them, but on the contrary he must clearly show by his manner that he is expecting some sign of recognition and is ready to reply to it.

Should a man render some slight service to any unknown lady in the street, such as picking up a parcel she may have dropped, or helping her out of any small difficulty, he must then raise his hat and withdraw at once. Such trifling acts as these do not by any means constitute an acquaintanceship, and to remain by her side when the incident is over would be ungentlemanly. Should, however, the service rendered be of real importance, as in the case of a street accident or some other disagreeable circumstance, in which he has been able to avert from her some unpleasantness which she would

have otherwise incurred, the lady will probably ask him to let her know to whom she is indebted for so much kindness. Then the proper course to pursue is to disclaim any special obligation, but if the lady persists, it is good manners to give the name. Should the gentleman feel much interested in the lady he may say, "I should very much like to call to-morrow to find out if you are none the worse for your adventure." She may then give him her address, and he would give her his card. Should a man observe any ladies whom he knows alighting from or entering a cab or carriage, unattended by a gentleman, he should at once advance (especially if there be no footman, and the driver maintains his seat), hold the door open and offer his hand, or protect a dress from the wheel, then, bowing, pass on. When accompanying ladies into a shop a man should always give them precedence, holding the door open from without if practicable.

When meeting ladies the hat should be taken *right off*, and replaced when they have passed. Should a lady stop to speak to a male acquaintance in the street the man should allow *her* to terminate the interview, and again raise his hat as he takes leave.

When a man meets a lady and gentleman together and stops to speak he should first address the lady.

No gentleman smokes when talking to, or walking with, a lady in the streets; exception may sometimes be made, however, when taking an informal walk in the country, but only then if the lady expresses a distinct wish that her companion should do so.

If a man is smoking when he meets ladies with whom he is acquainted, he should remove his cigar while he raises his hat, and not resume smoking until he has passed them. A man should always stop smoking when passing *closely* by ladies, whether he knows them or not. If accompanied by a dog, or dogs, their owner must hold himself responsible for their good behaviour. If his pets trespass in any way he must apologize for them and do his best to repair any damage they may have done. Should his dog attack another dog he must immediately call him off

and apologize to the owner of the dog assaulted.

ASSISTING LADIES

In handing ladies to their carriage a man offers his right arm to the senior of the party and walks with her to the door, opening it with his left hand. The other ladies will probably follow without escort, but if not, he must offer his arm to each in turn, holding an umbrella over them should it be raining. He closes the door and conveys their orders to the footman or coachman. If he is invited to accompany the ladies, should he be smoking, he throws his cigar or cigarette away at once. But if he should be intimate with the ladies he might ask permission to continue smoking.

When handing a lady into a hansom care must be taken to protect her dress from the muddy wheel. The gentleman asks if she would like the glasses down, and conveys her instructions to the driver, then raises his hat as she drives away. Should he accompany her he gives the cabman instructions across the roof of the cab, and if his companion wishes the glasses lowered he asks for them through the trap-door at the top of the cab. He should never smoke in a hansom with the glasses lowered.

In public conveyances, such as trains and buses, no definite rules need be laid down, save that a man should render a woman any service that lies in his power, such as helping her to alight, opening a door, or closing a window. Great care should be taken not to incommode one's fellow passengers in a crowded vehicle, more especially when they belong to the weaker sex. A lady always precedes a man in entering a vehicle, while the man should be the first to alight, in order to help her out. When accompanying a lady in an omnibus, should she prefer to ride on top, she ascends first, the man, who should relieve her of all impediment such as umbrella, etc., following her. There seems to be an idea in the lowly classes that it is correct for a man to precede a lady in ascending steps or stairs. This is not in accordance with the practice of good society.

Don't take up more room than you need in public conveyances.

Don't dash your newspaper in the faces of other passengers.

Don't allow your wet umbrella to drip upon other people's clothes.

Don't carry your stick or umbrella with the ferule protruding at the back and threatening the safety of those who come behind.

It is hardly necessary to add that, although legally a man has no call to do so, yet common courtesy would prompt any one possessed of a particle of manliness to offer his seat to a woman if he saw her compelled to stand.

GENERAL CONDUCT (MEN)

When at a reception, or party of any sort, should a lady sing or play, the man nearest to her escorts her to the piano and helps her to arrange her music, to dispose of her gloves, fan, etc.

At a public dinner, when the party consists of men only, a guest should first pay his respects to the host, or, if the dinner is given by a public body, the members of the committee. At dinners given on behalf of charities, it is well to go prepared with a subscription. When dinner is announced the hosts and highest in rank file into the dining-room first and others follow according to precedence. When a young man is invited to dinner at the private house of his employer, he should be careful not to address the footman as "waiter."

Should a man make a call at luncheon time and be invited to remain for the meal, he would carry his hat and stick into the dining-room with him.

It is the duty of a man to find the carriage, or cab, for his party, after the theatre or reception, should there be no footman or commissioner to do so for him.

At a ball a man should never refuse to dance while ladies are sitting out.

When paying an afternoon call a man must carry his hat and stick into the drawing-room with him. The right hand glove should be removed. When in the room he holds his hat, stick, and glove in his left hand until his hostess invites him to put them down.

A gentleman never looks at his watch during a call, or at a reception of any kind.

A man should never remain seated in the company of ladies who are standing.

In a mixed company never speak to a friend of a matter of which the rest are ignorant, unless it is something which can be explained to them, and be made interesting to the whole party.

When a man is a host he should make his guests feel that they are all equal for the time, and as such they all have an equal claim upon his courtesies. Those of the humblest condition should receive as much attention as the rest, in ordinary matters, that they may not be made to feel their inferiority.

It is bad form to satirize or rail against any profession or business, since a member of that profession may possibly be present.

The courteous observances of social life should not be ignored in business intercourse. Good breeding insists that careful respect for the rights and feelings of others should not be disregarded under any circumstances whatever.

Having received a letter of introduction it is the better plan to deliver it in person, as the gentleman whose civility has been requested in your behalf will thus be saved the trouble of calling upon you. But if you cannot possibly call, send the letter and enclose a card with your address upon it.

Any one receiving a letter of introduction should immediately take steps to show some attention to the individual introduced. The usual thing is to ask him to dinner, if he is a social equal; to offer him one's services if he should be a superior; and to ascertain in what way one can be useful to him, if he is an inferior.

Carving should form an essential part of every man's education, as there are many occasions in social life when a man may be called upon to assist in the carving of some joint or poultry.

AN ENGAGED MAN

The rule that a man must approach the father of a girl before offering himself in marriage to her has, to some

extent, died out. At the same time it is considered dishonourable for a man to propose to a girl in the face of the decided disapproval of her family. Clandestine courtship is also regarded as dishonourable, except in circumstances where the girl is unhappy or oppressed and needs a champion. The usual way to ask for the admired one's hand is in person. This is always preferable to writing, though some men have not the courage to adopt the first course. Should the lady accept the offer the happy wooer must take the earliest opportunity of seeing her father, or failing him, her nearest friend, and begging him to permit the engagement. Should he consent, all is well; but in the contrary case, his decision should be accepted. Very often submission to such a decree effects more towards procuring its reversal than violent opposition. It is better for the young people to try and be patient, and more often than not they will find the truth of the French proverb, "All things come round to those who know how to wait."

Immediately upon having the engagement ratified, the accepted suitor gives the lady an engagement ring. This ring, together with all other presents and correspondence, must be returned if the engagement should be broken off. The accepted suitor is in duty bound to spend most of his leisure with his intended bride.

No man should drag a girl into a long engagement, nor should he propose to a girl until he is in a position to provide suitably for her.

IN THE STREET (WOMEN)

There is a quiet self-possession about a well-bred woman that marks her out from those of a lower class, whose manners are often florid. Self-effacement is as much the rule of good manners in the street as it is in society.

No well-bred girl or woman ever deliberately tries to attract male attention in the street, or to scrape up acquaintance with men.

A gentlewoman never invites men to meet her at restaurants, or other public places.

It is safer not to accept offers of

services from strangers, as one can never feel sure what kind of person makes the offer.

Should a woman meet another with whom she has become slightly acquainted, and who moves in a circle somewhat above her own, she should wait for the latter to recognize her first, before bowing.

When meeting a man whom she has no objection to numbering among her acquaintances, she denotes it by bowing first. If she has any reason to disapprove of a man, she either does not bow at all, or very coldly.

When a lady is walking between two gentlemen she should divide her attention as equally as practicable, or address most of it to the one who is the greater stranger to her.

GENERAL CONDUCT (WOMEN)

It is a useful and sensible plan for a hostess to have a "day" set apart for receiving callers. Ladies with plenty of leisure may have no difficulty about the etiquette of calling, but in the middle-classes the institution of the "At Home" day is a most valuable one.

One of the accomplishments a hostess should acquire is the gentle art of snubbing. This will enable her to repress the unduly officious without adopting harsh measures or losing her temper. When a sentence, well-sharpened and skilfully aimed, would answer all purposes, even if uttered with the gentlest voice and the politest intonation, it should be used in preference to the angry retort or cut direct.

It is a sad failure in good manners to neglect any point concerning the comfort and enjoyment of one's guests.

In choosing the moment to give the signal for ladies to leave a dinner table a hostess should first make quite certain every one has finished dessert, also be careful not to make the move at the very moment that some one has laid down a knife or fork, lest it might appear that the whole party had been waiting for the conclusion of that one individual's meal. If any one is in the midst of an animated or interesting conversation, the move should be deferred until it slackens off a little.

It is a kind custom, when balls are kept up till 3 or 4 p.m., for the hostess to arrange with the keeper of a coffee-stall for refreshments of a simple kind to be supplied to the coachmen and footmen of her guests, whose long weary wait is thus enlivened.

It is courteous for a hostess, when expecting a guest who has not visited her house before, to give the clearest possible directions as to the best mode of getting there. Note-paper prepared for country hostesses has almost always the name of the nearest station in one corner.

A hostess should realize that her guests are sometimes happiest when left to go their own ways.

Any one who has a moderately large visiting acquaintance should keep two visiting books, alphabetically arranged. In the first should be written the names of those visited, with their town and country addresses; while the other should be a sort of rough copy with the names written down the left-hand side of the page, and the rest divided into two columns, in which the owner marks the dates of the cards she leaves, or that are left upon her. This should be done every afternoon on coming in, and directions should also be given to the servants to separate those cards which were left without inquiry, from those which were left by persons who inquired if the lady was at home, so that on returning the call she may know whether to go in or merely leave her card.

When a guest has risen to take her leave, after calling, the hostess rings the drawing-room bell for the servant to be in readiness to show the visitor out. The hostess should not leave her other guests to accompany one of them to the hall door, but if her husband be present he would probably see a lady to her carriage.

To avoid the danger of being overwhelmed by the sociability of an idle neighbour, discourage the first indications of undue intimacy by making your own visits few and far between. A woman of good sense and proper self-respect will never be too lavish of her society; and if she has pleasant neighbours, will visit them always in moderation.

Having invited a friend to pass a few days at your house, and expecting her at a certain time, meet her on arrival, or, if that be impracticable, send a servant to secure a conveyance and attend to her luggage.

Before a guest's arrival the hostess should inspect the room to be given them to see that none of the articles that are in all modern and well-furnished houses are wanting. See also that a wardrobe and chest of drawers are empty, in readiness for the guest's clothes.

When a guest arrives have her luggage at once taken to the room prepared for her and send a servant to unstrap her trunks. Then let her be left alone to arrange her dress, after hot water has been taken up.

It is kind and considerate to inquire of your guest if there is any dish or article of food she particularly likes, so that you may have it on the table while she stays, and also if there is anything peculiarly disagreeable to her so that you may refrain from having it during her visit.

For such deficiencies as may be avoided or remedied refrain from making the apology that you consider your guest "no stranger," and that you regard her "as one of the family." These excuses are not in good taste.

If your guest desires to assist you in sewing, or in any other way, you may avail yourself of her offer, but be careful to employ her *in moderation only*.

Inquire on the first evening if your visitor is accustomed to take any refreshment the last thing before she retires for the night, and if she is have something sent to her room every night.

When your visitor is about to leave you make all smooth and ready for her departure. Send a servant up to strap and bring down her trunks, and see that a cab or carriage is at the door in due time to take her to the station. If possible let some member of the family accompany her to the station and see her off, attending to her luggage and securing tickets.

The hostess should rise to receive morning callers if they are ladies, but may receive gentlemen seated. When

the guests depart she rises and shakes hands with each. But when receiving guests at a dinner party the hostess rises to receive each, whether lady or gentleman, and her station should be near the door of the drawing-room. At an afternoon or evening reception the hostess often takes her stand on the landing of the stairs, greeting her guests as they reach the top, and having, if possible, some little appropriate "mot" for each as they pass into the drawing-room. She never descends to the refreshment room till the majority of the guests have done so.

If the entertainment be a concert, a hostess should say a few pleasant words to the professional performers when they arrive, and also compliment them at the end of the concert, and see that they have refreshments in the dining-room. In the case of amateur music, she should congratulate each performer at the conclusion of his or her song or piece.

At a country-house party, when the guests are staying in the house, the hostess introduces them to each other at once, and when sending them to dinner, endeavours to pair people differently each night, without greatly disturbing the order of precedence. After dinner she should do her best to arrange music, games, or some other form of entertainment.

When taking friends to a neighbour's house for a ball or any other festivity, the hostess should go in the first carriage, so as to be ready to introduce her party to the lady of the house as they arrive.

The mistress of a household is called upon to observe certain canons of behaviour towards her servants. In this, fairness, firmness, and consistency are needed. No well-bred woman ever speaks to her servants in a rude or hectoring way.

When a lady writes to ask another to give her particulars of a servant's character, she is really asking a favour, and should word her letter accordingly. This is very often forgotten, and the letter is too abrupt to be polite.

When shopping the true gentleman speaks quietly, gently, and unassumingly, not forgetting a "thank you," or "good-morning," to the

young man or woman who has been serving her.

Notes written to men by unmarried girls, such as those proffering thanks for some small service rendered, can scarcely be too short.

A woman should remember it is excessively rude to interpolate remarks when any one is speaking.

A bride must answer *personally* all notes referring to the presents she receives, and write some words of thanks, even when there is no accompanying note.

A bride's mother should see that the wedding-cake is sent out a day or two after the wedding. If desired, the confectioner, when supplied with the names and addresses, will undertake to send out the cake.

A really good chaperone is one who, without making any vexatious regulations, or preventing the legitimate amusements of her charges, is able to ensure their doing nothing that is either *outré* or improper. A good chaperone also takes especial care that her charges should know exactly where to find her in a ball-room, and requires that they should return to her side between the dances.

THE ENGAGED GIRL

It is usual, when a girl becomes engaged, for a short time to elapse before the affair is announced, except to the most intimate friends of both parties. This is a precaution against the inconveniences and disagreeables of broken engagements. But when the affair has become fairly well "cemented," as it were, and the time fixed for the marriage approaches, it is usual for the mother of the girl to have a dinner party, at which the fiancé is introduced to the friends of the family. This dinner is often followed by an evening party, with a similar object in view. Or an afternoon "At Home" is occasionally held sufficient to answer all purposes.

The bride-elect usually visits her future husband's family shortly after her engagement.

When the engagement has become an accepted fact the fiancée writes to her friends and tells them about it. Should she be motherless, she must

write to the elders, announcing her engagement, but otherwise this task is always undertaken by the mother. With distant acquaintances it is not necessary to write until the day is fixed and invitations are being sent out, and not even then if they are not to receive invitation to the wedding. In fact, it is in better taste not to do so, as it would look like suggesting a wedding present. It is this very thing that makes such notes extremely difficult to write. And it also imports an element of embarrassment into the selection of invited guests for the wedding.

Invitations are sent out on white cards with silver lettering. The shapes of these are various, and sometimes, like ordinary invitations, those to weddings are on sheets of oblong note-sized paper, which fold over and fasten down with a gummed flap.

CHILDREN

One of the most important social duties of parents is to bring up their children so that they should not be pests and nuisances to every one they meet.

No child should be allowed to run up and down a railway carriage, catching hold of the knees of other passengers with sticky fingers.

All children should be taught to be gentle, considerate, and polite to all.

As soon as they are old enough, little boys should be made to raise their caps.

Children should *never* forget to say "Please" and "Thank you."

One of the first lessons a mother should teach her children is that of self-control.

Children should be strictly forbidden to run into the apartments of visitors. Should they be sent there with a message let them be made to understand that they are always to knock at the door, and not go in till desired to do so. Also that they are not to play and make a noise just outside a visitor's room.

Children should not be allowed to jump on people's laps, put their hands into their pockets, rummage their belongings, or crumple and soil their clothes by clinging to them with their hands.

EXERCISE

It is very essential that the body should be properly exercised every day, and the following simple rules should be observed :—

1. Exercise in a fresh and airy room.
2. Exercise in absolutely free and loose clothing, in soft shoes, stockings, or bare feet; therefore morning just after getting up, or night before going to bed is a good time to choose.
3. Never exercise immediately after a meal.
4. Between each exercise take a deep breath in and let it out fully.
5. Increase duration of each exercise as strength and skill is acquired.
6. Execute every exercise with absolute precision and correctness, or the effect is lost.

It is important to remember that scientific physical training is not given only to acquire muscular strength, but for a definite beneficial effect upon each part of the body, *internal* as well as *external*. The following exercises, therefore, should be done exactly according to the directions given, which are based on scientific principles. Modern methods of exercise have discarded the use of dumb-bells, clubs, etc., partly because as used at present they have a definitely harmful effect, and partly because even if used in a scientific manner they produce an uneven development. Men and girls and boys, therefore, wishing to increase the muscular effort, can do so by performing the following exercises with the hands clasped behind the head, when the

elbows and head should be held back *the whole time*, or with the arms stretched upward and pressed back, the palms facing each other.

Before beginning a course of exercises, it is very important to learn the correct manner of standing. This is best done before a looking-glass (full length, if possible).

(1) Place the heels together, the feet *slightly* apart at the toes. Brace the knees back firmly and stretch the body up to its full height. The weight should swing slightly forward, just over the toes, the shoulders must be drawn down, but not too far back,—it is a mistake to suppose that the back should be absolutely flat. The chest must be quite free, and here it must be noticed that children breathe unrestrictedly, as they are often apt to hold the breath with the effort of standing straight. The lower part of the back should not be allowed to hollow, nor the waist to protrude forward. The head must be held erect, with the chin *well in*. The arms then pass straight down by the side of the thighs with the joints extended.

It is of the greatest importance that this position of the head, neck, shoulders and waist should be preserved in all the exercises (except, of course, where the part is to be moved).

A similar position should be acquired in sitting. Sit *well back* in the chair, letting the back of the shoulders get support, or if sitting unsupported (but this should not be expected too long at a time from children), let the spine be upright, but not rigid. *Never* sit forward on the chair, with the thighs unsupported and the back bowed—it is

EXERCISES. No. 1.



1. See Exercise 6.
4. Back & Shoulder Exercise.

2. Attention.
5 & 6. Breathing Exercise.
8. Shoulder Exercise.

3. Leg Lifting.
7. Balancing.

EXERCISES. No. 2.



1, 2, 3 & 4. Head & Chest Exercises. 5. Leg Lifting. 6, 7 & 8. Full Exercise

not really more restful and is *injurious*. If you are too tired to sit up properly, lie down for ten minutes.

(3) Next, one should learn to get complete rest; therefore, acquire a habit of absolute relaxation. It is just as important to be able to relax the muscles at will, as to contract them. It is not easy for a beginner, but once acquired, will be found considerably to reduce fatigue.

The body can be made to "go slack" by simple relaxation from the first position, or one foot can be placed to the side, so as to give a steadier support. Here the hands should *not* be clasped behind, as is taught in most schools, that causing the shoulders to protrude forward, but must hang loosely by the sides.

Positions 1 and 2 can be assumed alternately some four times on end.

(3) A good way of learning to relax is to lie on the floor, or in bed at night, and to concentrate the attention on, as it were, "letting go" in every part of the body. This is not as easy as it seems. Begin with the muscles of the face, especially those of the jaw, and during the resting time constantly notice whether your teeth have again become clenched. Raise each limb a little way and let it drop again loosely, till the whole body is resting passively on its support, *through* which it must be felt to be almost sinking. This must not be practised too long at a time, especially by those who find it difficult, but the duration can be *gradually* increased. This power of complete relaxation will be found useful in cases of insomnia and under any strain or hurry. Children are best tested by lifting a limb at a time and letting it drop, which it should do as a dead weight, and not remain held up actively.

(4) The carriage of the head and arch of the chest may be improved by pressing the head backward (by an active movement) with the chin firmly kept in, stretching upward with the *back* of the head, and then returning to the upright position. Head-turning should also be practised (equally to both sides) slowly, with the

(5) chin well in and the muscles of the neck tense all the time.

(6) Next, standing in the first (or attention) position, with the knees well back, turn the palms of the hands *outward*; pulling down the shoulders, till the chest is well expanded. Repeat about four times. Later a chest-lifting may be substituted as follows:—

Bend the elbows till the tips of the fingers touch the *outside* of the shoulders, keeping the elbows well in to the sides and *forward*. Take care not to hollow the back. Then press the head

(8) backward (as in 4), and lift the chest forward and upward as far as possible while the lower part of the back still remains inhollowed, and the weight swings forward over the toes. Resume the former position and repeat twice.

(9) Follow by dropping the hands and letting the body fall loosely forward from the waist with a round back, then rising to pos. 1.

(10) Next, from the bent arm position (7), stretch the arms vigorously to the sides, level with the shoulders. More stretch on the chest is produced by turning the palms *upward*. As flexibility increases

(11) bring the arms nearer the head in stretching, till they are close to the ears with the palms facing each other, and *pressed well back*, but the back must not be hollow. To stretch still further, clasp the

(13) hands above the head and pull upward. These movements must always be done as vigorously as possible.

(14) Men and strong children may after this do a swinging exercise. Stand between two high chairs back to back with a space between (or two other steady pieces of furniture). The chairs must be fixed by the weight of a person sitting on each. Place one hand on the back of each chair, straighten the elbows and press down till the feet are off the floor and the weight of the body rests on the hands alone. Swing the legs backwards and forwards (as in parallel bars) keeping the shoulders down all the time. This is important, and the exercise is valueless if the body be allowed to sink between the shoulders. It is easier to swing with crooked-up knees.

Next go on to a balance exercise. The simplest is as follows :—

(15) Put the hands on the hips for support, with the thumbs behind. Rise slowly on the toes, letting the heels come apart and balance for a few moments. This and walking on the toes is useful for increasing the arch of the foot.

(16) Balancing may also be done by raising one leg at a time (with the knee straight), forward, backward or sideways, *the trunk being always kept erect*, in which the difficulty consists, and the weight shifted at the hips.

(17) Children may try pulling up one knee as high as possible, clapping their hands round it and maintaining the position as long as possible.

(18) A stronger form of balance is done in this way : Place one foot on a high chair or low table, so that the heel comes almost level with the other hip. Hold the arms out to the sides level with the shoulders. Now try to stretch the bent leg while keeping the body upright, till the lower heel reaches the chair or table.

(19) Here is an interesting but difficult balance exercise : Place the hands on the hips (as in 15), slowly stretch one leg backward, keeping it quite straight, and bend the other, letting the trunk incline slowly forward, so that eventually the trunk and the back leg are in the same straight line and parallel with the floor, while the supporting leg is bent to about a right angle at the hip and knee. Care must be taken to raise the back leg high enough.

(20) An amusing balancing game may be played by folding a newspaper across, standing it on the floor, and then grasping one foot in one hand (opposite side easier, same side more difficult). Bend the supporting leg till the newspaper can be picked up with the teeth.

(21) After the balance follows an exercise for the shoulders. A useful one is the arm movement in swimming, but for this purpose is best taken in the following way :—

(a) Bring the hands together (pointing forward) to the middle of the chest, elbows down.

(b) Shoot the hands straight forward on a level with the chest.

(c) *Slowly* part the arms, turning the palms upward (not as in swimming), level with the shoulders.

The arm-turning outward (No. 6) may here be repeated and is useful for round-shouldered children.

(22) A stronger movement can be substituted for men—*arm-throwing* (rapidly in 4 counts).

(a) Swing the arms forward level with chest, palms facing.

(b) Part them, turning the palms upward.

(c) Bring them above the head, palms facing.

(d) Drop them forward and downward to the sides.

Another strong movement that has an action on the back of the shoulders is done in the following way :—

(23) Place the hands on the back of a *fixed* chair and the feet on the cross-bar at the back. Let some one stand behind and place one hand *under* the back of the head. First let the supporting person push the head from underneath upwards, so that it rests on the hollow of his hand while you take the feet off the cross-bar, and pushing down with your hands and well back with your head, rest on them alone. Then replace the feet on the cross-bar and rest. Repeat two or three times. It is very important to push down with the hands first and to hold the head back and the shoulders down.

After the shoulder exercise, the following group of movements must be done :—

(24) Kneel on the ground, with the knees slightly apart and the hands on the hips (as in 15), keeping the body perfectly straight in all the joints from the head to the knees, let the trunk fall straight backward a little way, and rise almost immediately. With practice both the inclination and the duration of the movement may be increased, but great care must be taken not to bend at the hips nor hollow in the waist.

(25) For men this may be replaced by a stronger exercise :—

Sit on the floor with the legs stretched out in front, the feet either firmly held

down by some one else, or fixed under a steady piece of furniture which has a space below. If done on the bed, the feet may be placed under the horizontal foot-rail. With the hands on the hips, the chest *well lifted*, head back, and the back straight, but not hollowed, let the body fall gently backward till it touches the floor; relax and rest, then rise again slowly. To increase the difficulty further, the hands can be brought to the shoulders (No. 7) or stretched above the head, but *great* care must be taken not to overstrain, as this is a very strong movement.

(26) *Leg-lifting* is an exercise with similar effects. Lie on the floor or bed, and stretching the arms straight back, grasp something firm, as the sides of the head-rail. Lift the legs *slowly* straight upward to the vertical position (but no more) and let them down slowly, taking care to breathe freely all the time. With practice the rate may be made very slow, but this too must not be allowed to lead to strain.

(27) For children, Nos. 24, 25, 26 may be replaced by "Frog-jump." Raise the heels, bend the knees, keeping them turned well out, and lean down, placing the palms of the hands on the floor (fingers pointing *forward*) and as near as possible to the feet. First, getting the weight back, move the hands forward together; then jump the feet close to the hands again. Care must be taken not to let the children do it on their *knees*, but on the *feet*. Racing in this way is very amusing.

(28) For boys, "*hare-jump*" may also be used:—

Start in the same position as for 27, but instead of putting the hands a little way forward, push off strongly with the feet, so as to take a long leap forward on to the hands, trying at the same time to get the legs stretched out behind, and immediately by doubling up at the hips and knees bring the feet close to the hands again.

The next group of exercises is for the trunk.

(29) Place the hands on the hips and the feet apart firmly on the ground. Then circle, or roll the trunk *from the waist*—first doubling up forward so as to round the back, then bending to the left, then backward, to

the right, and so on. This should be repeated, now starting by the right, and the bending must be as great as possible in each direction. The hips and legs should be kept as stationary as possible, the aim being to roll the upper part of the trunk round the centre of the waist-line. This movement is useful to aid digestion, as well as to make the body supple.

(30) For children this may be replaced by wrestling. Let two stand facing each other, with their arms stretched out sideways. Each then bends a little to the left (or right), and clasps the other so that he has one arm above, the other under his opponent's shoulder. The object is to get the opponent down *without* using the legs.

A good exercise in this group for men is as follows:—

(31) Raise the heels, bend the knees outward, and leaning forward place the palms of the hands on the ground close to the feet. Now jump the feet back so that the body is resting on the hands and the toes and is straight from the head to the heels. *Never* let it sag down at the waist. Here the elbows may be bent till the chest nearly touches the floor and stretched again, as many times as desired, but the movement is not correctly done if the back is not kept from hollowing. Then turn gently over towards the right, putting the right hand on the hip, so that the weight rests on the left hand and the left foot (the right being on the top of the left foot). The body must be absolutely straight and not allowed to sag down in the middle. Always repeat to the other side.

Next do some jumping exercises.

The simplest is leaping straight up into the air from first raising the heels and bending the knees. In the jump itself the knees must be absolutely stretched and the leap as high as possible. The same may be done with parting the legs in mid-air and bringing them together again quickly before landing; or with turning in the air to one or the other side, or right round.

(34) In all jumping, the landing must be on the toes, with the knees

bent and well apart. A variation of ordinary jumping over a rope may be done without a run. Stand close to the rope and jump by jerking the knees suddenly up.

(36) Children enjoy "Jump the Shot" done in the following way:—

Tie a small sandbag or some other heavy, but not hard object to the end of a rope. Stand in the middle of a circle of children who face the centre, and swing the rope gently round, gradually letting out the slack, till the weighted end of the rope passes under the children's feet while they jump to avoid catching it, as in skipping. If one does stop the rope, take care to let it go slack immediately, so as not to trip the child.

Skipping is very good exercise, but the rope should not be turned *forward* as is usually done, for that narrows the chest, but *backward*, which expands it.

Boys or men may try some vaulting exercises:—

(37) Two stand side by side, the width of a man apart, joining the inside hands, the outside on their hips, or supported on a firm piece of furniture. Each puts the outside leg a long step back and bends the knee of the inside leg. The performer, standing behind them, now runs up, takes a start off the floor with both feet, and putting a hand on the inside shoulder of each of his supports, doubles up his knees forward, and then quickly straightening them, vaults over their joined hands.

(38) Over form (without back), tressle or narrow table:—

Run up to the form, facing it, take a start off both feet. Put one hand on each edge of the form and fling the legs *perfectly straight* out behind, facing downward on to the form. Double the knees up quickly and land so as to arrive with the feet close under one hand, which still grasps the form. If vaulting with legs to the right, land facing to the left, left hand grasping.

(39) For children this may be taken over a low form without a run. Stand with one side against the side of the form, grasp an edge of the form with each hand and keeping the knees *doubled up* jump from one side to the other over the form, slipping the hands

forward along the edges after each jump.

(40) Over high form, tressle, narrow table or garden wall:—

Stand with the right side against the table, etc. Take a step forward with the left foot, and placing the right hand on the table press down on it, and pushing off by a step from the right foot, fling both legs (straight) forward, so as to vault sideways over the table, landing on the other side with bent knees, the left hand grasping the edge of the table.

All these movements must be repeated equally to both sides.

Finish with a breathing exercise, preceded, if the heart-beat is much quickened, by rising on the toes several times.

(41) The simplest form is to place the hands on the lower ribs, and standing with the body quite relaxed, to take in a deep breath through the nose, expanding the lower part of the chest first so that the hands are pushed out sideways, and then the upper. Do not *hold* the breath, but as soon as the lungs are quite filled, let it out through the mouth. The out-breath can be assisted by a pressure of the hands and a slight bending forward of the body.

(42) A deeper breath can be obtained by reaching the arms straight forward (palms facing each other or up), parting them for the in-breath and bringing them forward for the out-breath, or by raising the arms

straight sideways and upward into the stretch position (palms facing) for the in-breath, and lowering for the out-breath.

Weak and anaemic children will profit greatly by being made to do breathing exercises for five minutes night and morning before an open window, *even in winter*.

Breathing exercises should be done with the body relaxed, but not lying on the back, as that prevents chest expansion backwards.

Many of the children's games in the section entitled Games and Amusements are splendid as physical exercises and the young should be encouraged in these games.

FLOWERS,

THEIR LANGUAGE AND MEANING

A List of Flowers, Botanical Specimens, etc., with the poetical language each is supposed to convey :—

Abatina, fickleness.
 Acacia, chaste love.
 Acacia (Rose), platonic love ; friendship.
 Acacia (Pink), elegance.
 Acacia (Yellow), secret love.
 Acanthus, artifice.
 Aconite (Woolfsbane), misanthropy.
 Aconite (Crowfoot), lustre.
 Adonis, sorrowful remembrance.
 Agrimony, thankfulness.
 Allspice, compassion.
 Almond (Flowering), hope.
 Almond, (Laurel), perfidy.
 Almond tree, stupidity ; indiscretion.
 Aloe, affliction ; grief.
 Althea Frutex, consumed by love.
 Amaranth, immortality.
 Amaranth or Coxcomb (Globe), unchangeable.
 American Cowslip, divine beauty.
 American Starwort, welcome to a stranger ; cheerfulness in old age.
 Amethyst, admiration.
 Anemone (Garden), forsaken.
 Anemone (Field), sickness.
 Angelica, inspiration.
 Apple, temptation.
 Apple Blossom, preference.
 Apple Thorn, deceitful charms.
 Apricot, doubt.
 Arbor Vitæ, unchanging friendship.
 Arum, or Wake Robin, ardour.
 Ash Tree, grandeur.
 Ash (Mountain), prudence.
 Aspen Tree, or Spreading Poplar, lamentation.
 Asphodel, my regret follows you to the grave.
 Aster (China), variety, afterthought.
 Auricula, (Green-Edged), importune me not.
 Auricula (Scarlet), avarice.

Austurtium, splendour.
 Azalea, temperance.
 Azalea (Indian), true to the end.
 Bachelor's Buttons, celibacy.
 Balm, sympathy.
 Balm (Gentle), pleasantry.
 Balm of Gilead, care ; relief.
 Balsam, impatience ; ardent love.
 Balsam (Red), touch me not ; impatient resolves.
 Basil (Sweet), hatred.
 Bay Leaf, I change not till death.
 Bay Tree, glory.
 Begonia, dark thoughts.
 Bellflower (Pyramidal), constancy.
 Bellflower (small white), gratitude.
 Beech Tree, prosperity.
 Belladonna, silence.
 Belvidere, declaration against you.
 Betony, surprise.
 Bilberry, treachery.
 Bindweed (Great), insinuation.
 Bindweed (Field Convolvulus), humility.
 Birch Tree, meekness.
 Birdsfoot Trefoil, revenge.
 Bittersweet (Nightshade), truth.
 Black Thorn, difficulty.
 Bladder Nut Tree, amusement.
 Blue Bell, constancy.
 Blue Bottle (Centaury), delicacy.
 Bonus Henricus, goodness.
 Box, stoicism.
 Borage, bluntness.
 Bramble, lowliness ; envy.
 Broom, humility, neatness.
 Buckbean, calm ; repose.
 Bullrush, docility.
 Burdock, touch me not ; importunity.
 Bugloss, falsehood.
 Buttercup, childishness ; ingratitude.
 Butterfly Orchis, gaiety.
 Butterfly Weed, let me go.

- Cabbage, gain.
 Cactus, horror.
 Calla *Æthiopica*, magnificent beauty ; modesty.
 Calceolaria, keep this for my sake.
 Calycanthus, benevolence ; compassion.
 Camellia Japonica, unpretending excellence ; pity.
 Camellia Japonica (White), perfected loveliness.
 Camomile, energy in adversity.
 Campanula, or Pyramidal Bell-Flower, gratitude.
 Canariensis, self-esteem.
 Canary Grass, perseverance.
 Candytuft, indifference.
 Canterbury Bell, acknowledgment ; gratitude.
 Cardamine, paternal error.
 Cardinal Flower, distinction.
 Carnation, woman's love.
 Carnation (Deep Red), Alas ! for my poor heart.
 Carnation (Striped), refusal.
 Carnation (Yellow), disdain.
 Catchfly (Silene), pretended love.
 Catchfly (Red), youthful love.
 Catchfly (White), betrayed.
 Cedar Leaf, live for thee.
 Cedar of Lebanon, incorruptible.
 Cedar Tree, constancy ; strength.
 Celandine, joys to come.
 Centaury, felicity.
 Chamomile, energy in adversity.
 Champignon, suspicion.
 Chequered Frutillary, persecution.
 Cherry Tree, education.
 Cherry Tree (Cornelian), durability.
 Cherry Tree (White), deception.
 Chestnut, luxury.
 Chestnut Tree, do justice.
 Chickweed, rendezvous ; simulated simplicity.
 Chicory, frugality.
 China Aster, variety.
 China Aster (double), I reciprocate.
 China Aster (single), I will consider it.
 China or Indian Pink, aversion.
 China Rose, beauty always new.
 Christmas Rose, relieve my anxiety.
 Chrysanthemum (China), cheerfulness in misfortune.
 Chrysanthemum (Red), I love.
 Chrysanthemum (White), truth.
 Chrysanthemum (Yellow), slighted love.
 Cineraria, ever bright.
 Cinquefoil, maternal love.
 Cistus (Gum), I shall die to-morrow.
 Citron, ill-natured beauty.
 Clarkia, will you dance with me ?
 Clematis, mental beauty.
 Clematis (Evergreen), artifice ; poverty.
 Clotbur, rudeness.
 Clover, dignity.
 Clover (four leaved), be mine.
 Clover (Red), industry.
 Cobaea, gossip.
 Cockscornb Amaranth, foppery ; affection.
 Coltsfoot, justice shall be done.
 Columbine, folly ; frivolity.
 Columbine (Purple), desertion ; resolution.
 Columbine (Red), tremblingly anxious.
 Convolvulus, bonds ; uncertainty.
 Convolvulus Major, extinguished hope.
 Convolvulus Minor, night.
 Convolvus (Pink), worth sustained by affection.
 Coriander, concealed merit.
 Coreopsis, always cheerful.
 Coreopsis Arkansa, love at first sight.
 Corn, riches.
 Corn-bottle, delicacy.
 Coronella, success crown your desires.
 Cowslip, pensiveness.
 Cowslip (American), I worship you.
 Crab (Blossom), ill-nature.
 Cranberry, cure for heartache.
 Cranesbill, envy.
 Creeping Cereus, horror.
 Cresses, stability.
 Crocus, abuse not.
 Crocus (Saffron), mirth.
 Crocus (Spring), gladness.
 Crowsbill, envy.
 Crowsfoot, ingratitude.
 Crowsfoot (Aconite-leaved), lustre.
 Cudweed (Everlasting), remembrance for ever.
 Cuckoo Plant, ardour.
 Cucumber, criticism.
 Currants, you please all.
 Cuscuta, meanness.
 Cyclamen, diffidence.
 Cypress, death ; mourning.
 Cypress and Marigold, despair.
 Daffodil, chivalry.
 Daffodil (Great Yellow), regard.
 Dahlia, elegance with dignity.
 Daisy, cheerfulness.
 Daisy (Double), participation.
 Daisy (Ox-Eye), a token.
 Daisy (Red), unconscious.

Daisy (White), innocence.
 Daisy (Garden), I share your sentiments.
 Daisy (Wild), I will think of it.
 Daisy (Party-Coloured), beauty.
 Damask Rose, brilliant complexion.
 Dandelion, love's oracle.
 Daphne Odora, painting the lily.
 Darnel, wickedness.
 Dead Leaves, sadness.
 Dew Plant, a serenade.
 Diosma, uselessness.
 Dittany of Crete, high birth.
 Dittany (White), passion.
 Dock, patience.
 Dodder, meanness.
 Dodder of Thyme, care ; selfishness.
 Dogvane, deceit.
 Dogwood, duration.
 Dogwood Blossom, Am I perfectly indifferent to you ?
 Dragon Plant, snare.
 Dragon Wort, horror.
 Dried Flax, utility.
 Ebony, blackness ; hardness.
 Eglantine or Sweet Briar, I wound to heal.
 Elder, compassion ; real.
 Elm, dignity.
 Endive, frugality.
 Eupatorium, delay.
 Evergreen, poverty.
 Evergreen Thorn, solace in adversity.
 Everlasting, never-ceasing remembrance.
 Everlasting Pea, lasting pleasure.
 Fennel, moral force.
 Fern, sincerity.
 Fern (Flowering), I am thinking of it.
 Fever-root, delay.
 Ficoides, your looks freeze me.
 Fig, argument ; endurance.
 Fig Marigold, idleness.
 Fig Tree, profuse.
 Filbert, reconciled.
 Fir, time.
 Fir Tree, elevation.
 Flax, home industry ; appreciation of kindness.
 Fleur-de-Lys, flame ; I burn.
 Flora's Bell, you make no pretension.
 Flower-de-Luce, flaming.
 Flowering Fern, reverie.
 Flowering Reed, confidence in heaven.
 Fool's Parsley, silliness.
 Forget-me-not, forget me not.
 Foxglove, insincerity ; a hidden wish.

Foxtail Grass, sporting.
 Frankincense, faithfulness.
 French Honeysuckle, rustic beauty.
 French Marigold, jealousy.
 Frog Optorys, disgust.
 Fuchsia, good taste.
 Fuller's Teasel, importunity.
 Fuller's Thistle, misanthropy.
 Fumitory, spleen.
 Furse, or Grove, lasting affection.
 Garden Chervil, sincerity.
 Garden Daisy, I partake your sentiments.
 Garden Marigold, uneasiness.
 Garden Sage, esteem.
 Garland of Roses, reward of virtue.
 Gentian, virgin pride.
 Geranium, gentility.
 Geranium (Apple), present preference.
 Geranium (Crane's Bill), envy.
 Geranium (Dark), melancholy.
 Geranium (Fish), disappointed expectation.
 Geranium (Ivy), I engage you for the next dance.
 Geranium (Nutmeg), an expected meeting.
 Geranium (Oak), deign to smile.
 Geranium (Rose or Pink), preference.
 Geranium (Scarlet), comforting.
 Geranium (Silver-leaved), reversed decision.
 Geranium (Pencil-leaved), ingenuity.
 Geranium (Sorrowful), disposed to melancholy.
 Geranium (Wild), piety.
 Gillyflower, bond of love ; undying admiration.
 Gladiolus, strength of character.
 Gloryflower, glorious beauty.
 Gloxinia, a proud spirit.
 Goat's Rue, reason.
 Golden Rod, encouragement ; precaution.
 Gooseberry, anticipation.
 Gorse, enduring love.
 Gourd, greatness.
 Grape (Wild), charity.
 Grass, desolation ; submission.
 Guelder Rose, winter ; age.
 Harebell, grief.
 Hawkweed, quick-sighted.
 Hawthorn, hope.
 Hazel, reconciled.
 Heartsease or Pansy, you occupy my thoughts.
 Heath, solitude.

- Helenium, tearfulness.
 Heliotrope, devotion to duty.
 Helbore, scandal.
 Helmetflower (Monkshood), knight-errantry.
 Hemlock, you will be my death.
 Hemp, fate.
 Henbane, defeat.
 Hepatica or Linnwort, confidence.
 Hibiscus, delicate beauty.
 Holly, foresight; incentive to remembrance.
 Hollyherb, enchantment.
 Hollyhock, fecundity.
 Hollyhock (White), female ambition.
 Honesty, honesty, fascination.
 Honey Flower or Melanthus, secret love.
 Honeysuckle (Coral), the colour of my fate.
 Honeysuckle (French), rustic beauty.
 Honeysuckle (Monthly), bond of love.
 Honeysuckle (Wild), devoted love.
 Hop, injustice.
 Horehound, fire.
 Hornbeam Tree, ornament.
 Horse Chestnut, luxury.
 Hortensia, you are cold.
 Houseleek, domestic economy; vivacity.
 Houstonia, contentment.
 Hoya, sculpture.
 Hyacinth, jealousy; sport.
 Hyacinth (Blue), constancy.
 Hyacinth (Purple), sorrow.
 Hyacinth (White), unobtrusive loveliness.
 Hydrangea (with rose-coloured flowers, sometimes blue, hue very changeable), boastful, heartlessness.
 Hyssop, cleanliness.
 Iceland Moss, health.
 Ice-plant (Winter), rejected addresses.
 Imperial Montague, power.
 Indian Corn, éclat; military trophy.
 Indian Cress, warlike trophy.
 Indian Jasmine (Ipomeoa), attachment.
 Indian Pink (Double), always lovely.
 Indian Plum, privation.
 Ipomeoa, attachment.
 Iris (with flowers of various colours, usually blue), my compliments; I have a message for you.
 Iris (German), flame.
 Iris (Yellow), passionate love.
 Ivy, fidelity, friendship, matrimony; I have found one true heart.
 Ivy Spray, anxious to please.
 Jacob's Ladder, come down.
 Jasmine (Cape), great joy.
 Jasmine (Indian), I am attached to you.
 Jasmine (Spanish), sensuous.
 Jasmine (Virginian), separation.
 Jasmine (White), amiability.
 Jasmine (Yellow), elegance; grace.
 onquil (with golden flowers, emitting a pleasant and powerful perfume), I yearn for your affection.
 Judas Tree, betrayal; unbelief.
 Juniper, protection.
 Justicia, perfection of feminine loveliness.
 Kennedia, mental beauty.
 Kingcup, or Buttercup, wish to be rich.
 Laburnum, forsaken; pensive beauty.
 Lady's Mantle, fashion.
 Lady's Slipper, or Cypripedium (with purple, pink, or yellow flowers), capriciousness; fickleness.
 Lantana, rigour.
 Larch, audacity.
 Larkspur (with blue, white, or pink flowers; a very handsome blossom, easy to cultivate), levity; fickleness.
 Laurel (Common), perfidy.
 Laurel (Ground), perseverance.
 Laurel (Mountain), ambition; glory.
 Laurel-leaved Magnolia, dignity.
 Lauristinus, neglected.
 Lavender, distrust.
 Lemon, zest.
 Lemon Blossom, fidelity; discretion.
 Lent Lily, sweet disposition.
 Lettuce, cold-hearted.
 Lichen, dejection; sorrow.
 Lilac (Field), humility.
 Lilac (Purple), incipient love.
 Lilac (White), purity.
 Linden or Lime Tree, conjugal love.
 Lionwort, confidence.
 Lily (Day), coquetry.
 Lily (Imperial), majesty.
 Lily (White), purity; sweetness of disposition.
 Lily (Yellow), falsehood.
 Lily of the Valley, promise of happiness.
 Lint, I feel my obligations.
 Liquorice (Wild), I decide against you.
 Liverwort, confidence.
 Lobelia, malevolence.
 Locust Tree, elegance.
 Locust Tree (Green; a very handsome tree shrub, with handsome white

- fragrant blossoms), affection beyond the grave.
 London Pride, frivolity.
 Lotus, eloquence.
 Lotus Flower, estrangement.
 Lotus Leaf, I recant.
 Love-lies-bleeding, hopeless not heartless.
 Lychnis, religious enthusiasm.
 Lythrum, pretension.
 Lucern, life.
 Lupine, voracity,
 Madder, calumniousness.
 Madwort, tranquillity.
 Magnolia, love of nature.
 Magnolia (Laurel-leaved), dignity.
 Magnolia (Swamp), perseverance.
 Maiden Hair, discretion; secrecy.
 Maize, plenty.
 Mallow (Marsh), beneficence; sweet disposition.
 Mallow (Syrian), consumed by love.
 Mallow, (Venetian), refined beauty.
 Manchincel, hypocrisy.
 Mandrake, horror.
 Maple, reserve.
 Marigold; see Marygold.
 Marjoram, blushes.
 Marvel of Peru, timidity.
 Marygold, chagrin; contempt.
 Marygold (African), vulgar-minded.
 Marygold (Fig), idleness.
 Marygold (French), jealousy.
 Marygold (Garden), uneasiness.
 Meadow Lychnis, wit.
 Meadow Saffron or Colchicum Autumnale, my best days are past.
 Meadowsweet, uselessness.
 Mesembryanthemum, laziness.
 Mezerion, I desire to please.
 Michaelmas Daisy, afterthought.
 Mignonette, your qualities surpass your charms.
 Milfoil (Yarrow), war.
 Milkvetch, your presence softens my pain.
 Milkwort, hermitage.
 Mimosa or Sensitive Plant, courtesy.
 Mint, virtue.
 Mistletoe, I surmount all obstacles.
 Mock Orange, counterfeit.
 Monkhood (Helmet Flower), chivalry, knight-errantry.
 Moonwort, forgetfulness.
 Morning Glory, affection.
 Mowbray, weakness.
 Moss, maternal love; recense.
 Mosses, maternal love.
 Mossy Saxifrage, affection.
 Motherwort, secret love.
 Mountain Ash, prudence.
 Mourning Bride, unfortunate love.
 Mouse-eared Chickweed, ingenious simplicity.
 Moving Plant, agitation.
 Mudwort, tranquillity.
 Mugwort, happiness.
 Mulberry Tree, wisdom.
 Mulberry (Black), I will not survive you.
 Mullein, good nature.
 Mushroom, suspicion.
 Musk (Crowfoot), weakness.
 Musk (Rose), capricious beauty.
 Mustard Seed, indifference.
 Myrrh, gladness.
 Myrobalm, privation.
 Myrtle, love in absence.
 Narcissus, egotism.
 Narcissus (double), female ambition.
 Nasturtium, patriotism; trophy of war.
 Nasturtium (Scarlet), splendour.
 Neomphila, I forgive you.
 Nettle, cruelty.
 Nettle Tree, concert.
 Nettle (Stinging), slander.
 Night Blossom or Cereus, transient beauty.
 Night Convolvulus, night.
 Nightshade, Circea, or Solanum Nigrum, sorcery; scepticism; witchcraft; dark thoughts.
 Nightshade (Bitter), truth.
 Nosegay, gallantry.
 Oak Tree, hospitality.
 Oak Leaf, bravery with humanity.
 Oak (White), independence.
 Oats, music.
 Oleander, beware.
 Olive Branch, peace.
 Orange, generosity.
 Orange Blossom, your purity equals your loveliness.
 Orange Flowers, chastity; bridal festivities.
 Orchis, a belle.
 Osier, frankness.
 Osmunda, dreams.
 Ox-eye, penitence.
 Palm, victory.
 Pansy or Heartsease, you occupy my thoughts.
 Parsley, useful knowledge.
 Pasque Flower, without presumption.

Passion Flower, Inconstancy ; religious fervour.

Pea (Sweet), or Lathyrus, departure.

Pea (Everlasting), invitation to an interview ; Wilt thou go ?

Peach, your qualities like your charms are unequalled.

Peach Blossom, your willing captive.

Pear Tree, affection.

Pelargonium, eagerness.

Pelargonium (White), gracefulness.

Pelargonium (Red), her smile the soul of witchery.

Pentstemon, pleasure without alloy.

Persicaria, restoration.

Penny Royal, your presence is not desired.

Peony, anger.

Peppermint, cordiality.

Periwinkle (Blue), pleasures of memory.

Periwinkle (Red), early friendship.

Periwinkle (White), pleasant memories.

Persimmon, lay mew here it is beautiful.

Petunia, never despair.

Pheasant's Eye, remembrance.

Phlox, or Wild Sweet William, unanimity ; our souls are united.

Pimpernel, change.

Pine Apple, you are perfect.

Pineapple, perfection.

Pine (Black), pity.

Pine (Pitch), philosophy ; time and faith.

Pine (Spruce), farewell ; hope in adversity.

Pink, boldness.

Pink (Indian Double), always lovely.

Pink (Indian Single), aversion.

Pink (Mountain), you are aspiring.

Pink (Red Double), pure and ardent love.

Pink (Single) pure love.

Pink (Variegated), refusal.

Pink (White), you are fair and fascinating.

Pink (Yellow), disdain.

Plane Tree or Sycamore, genius.

Pleurisy Root, cure for the heartache.

Plum Tree, perform your promise.

Plum Tree (Wild), independence.

Polyanthus, pride of riches.

Polyanthus (Crimson), the heart's mystery.

Polyanthus (Lilac, a native of the Alps), confidence.

Pomegranate, foolishness.

Pomegranate Flower, native elegance.

Pompon Rose, gentility.

Poplar, courage.

Poplar (White), time.

Poppy (from which opium and laudanum are extracted), fleeting pleasure.

Poppy (Red), consolation.

Poppy (Scarlet), fantastic.

Poppy (White), sleep.

Poppy (Oriental), silence.

Potato, beneficence.

Prickly Pear, satire.

Pride of China, dissension.

Primrose (Early), youth.

Primrose (Evening ; growing two or three feet high, the flowers of which open with remarkable suddenness), inconstancy.

Primrose (Red), unrewarded merit.

Primula, diffidence.

Privet, mild defence.

Purple Clover, provident.

Pyramidal Bell Flower, gratitude.

Pyrethrum, I am not changed ; they wrong me.

Quaking Grass, agitation.

Quamoclit, busybody.

Queen's Rocket, hail to the queen of coquettes.

Quince, temptation.

Ragged Robin, wit.

Ranunculus, dazed by superior charms.

Ranunculus (Garden), rich in attractiveness.

Ranunculus (Wild), ingratitude.

Raspberry, remorse.

Ray Grass, vice. Redbay, memory.

Red Catchfly, youthful love.

Rest Harrow, obstacle.

Reeds, music.

Reeds (Split), indication.

Rhododendron, danger.

Rhubarb, advice.

Rocket, rivalry.

Rosebay, beware.

Rose (Austrian) with fine leaves and small blossoms, you are all that is lovely.

Rose (Boule de Neige), only for thee.

Rose (Bridal ; this is the cultivated bramble, the flowers being small, white, double, and very beautiful), happy love.

Rose (Burgundy), unconsciousness.

Rose (Cabbage), ambassador.

Rose (Campion), only deserve my love.

Rose (Carolina), dangerous love.

Rose (Charles Lefebre), speak low if you speak love.

Rose (China), grace.
 Rose (Christmas), soothe my anxiety.
 Rose (Daily), I aspire to your smile.
 Rose (Damask), freshness.
 Rose (Deep Red), bashful love.
 Rose (Dog), pleasurable but painful.
 Rose (Gloire de Dijon), a messenger of love.
 Rose (Guelder), winter 'of life.
 Rose (Hundred-leaved), puffed-up pride.
 Rose (Japan), pity.
 Rose (Lancaster), union.
 Rose (May), precocity.
 Rose (Maiden-Blush), if you love me, you will disclose it.
 Rose (Moss-Bud), confession of love.
 Rose (Moss-Blown), superior merit.
 Rose (Mundi), you are merry.
 Rose (Musk), capricious beauty.
 Rose (Clustered Musk), charming.
 Rose (Red Bud), youth and beauty.
 Rose (Red Blown), obvious beauty.
 Rose (Red Leaved), beauty with prosperity.
 Rose, (Single), simplicity.
 Rose (Thornless), ingratitude.
 Rose (Unique), call me not beautiful.
 Rose (White Bud), ignorance of love.
 Rose (White Blown), I am worthy of you.
 Rose (White Withered), transient impression.
 Rose (Yellow), declining love.
 Rose (York), war.
 Rose (Red and White in conjunction), unity.
 Rose (Full-blown placed over two buds), secrecy.
 Roses (Crown made of), reward of merit.
 Rosebud (Red), pure and lovely.
 Rosebud (White), girlhood.
 Rosebud (Moss), confession of love.
 Rosebay (Rhododendron), beware ; danger.
 Rosemary, your presence revives me.
 Rudbekia, justice.
 Rue, disdain.
 Rush, docility.
 Rye Grass, changeable disposition.

Saffron, marriage.
 Saffron Flower, do not abuse ; beware of excess.
 Saffron Crocus, mirth.
 Sage, esteem ; domestic virtues.
 Sainfoin, agitation.

Salvia (Blue), I think of thee.
 Salvia (Red), for ever thine.
 Sardony, irony.
 Satin Flower, sincerity.
 Saxifrage, (Mossy), affection.
 Scabious, unfortunate love.
 Scabious (Sweet), widowhood.
 Scarlet Lychnis, sunbeaming eyes.
 Schinus, religious enthusiasm.
 Scilla (Blue), forgive and forget.
 Scilla, (Siberica), pleasure without alloy.
 Scilla (White), sweet innocence.
 Scotch Fir, elevation.
 Service Tree, prudence.
 Sea Lavender, dauntlessness.
 Senvy, indifference.
 Shamrock, light-heartedness. The national emblem of Ireland.
 Snakesfoot or Dragonswort, horror.
 Snake's Lounge, slander.
 Snap Dragon, presumption.
 Snowball, thoughts of heaven ; purity.
 Snowball Tree, age.
 Snowdrop, consolation ; hope.
 Sorrel, paternal affection.
 Sorrel, (Wild), wit, ill-timed.
 Sorrel (Wood), joy.
 Southernwood, jest ; banter.
 Sow Bread, diffidence.
 Spanish Jasmine, sensuality.
 Spearmint, warmth of sentiment.
 Speedwell or Veronica, female fidelity.
 Speedwell (Germander), facility.
 Speedwell (Spiked), resemblance.
 Spider Ophrys, adroitness ; skill.
 Spiderwort, esteem, but not love ; transient love.
 Spiked Willow Herb, pretension.
 Spindle Tree, your image is engraved on my heart.
 Star of Bethlehem (with bulbous root, and white six-petalled flowers without calyx), guidance ; reconciliation.
 Starwort, afterthought.
 Starwort (American), cheerfulness in old age.
 St. John's Wort, you are a prophet ; superstition.
 Stock, lasting beauty.
 Stock (Ten-week), promptitude.
 Stonecrop, tranquillity of mind.
 Straw (Broken), rupture.
 Strawberry, perfect excellence.
 Strawberry Blossoms, foresight.
 Strawberry Tree or Arbutus, esteem and love.
 Stramonium, disguise.

- Sunflower (Dwarf), adoration.
 Sunflower (Tall), haughtiness.
 Swallow-wort, cure for heartache.
 Sweetbriar, simplicity.
 Sweetbriar (European), I wound to heal.
 Sweetbriar (Yellow), decrease of love.
 Sweet Basil, good wishes.
 Sweet Flag, fitness.
 Sweet Pea, delicate pleasures.
 Sweet Sultan, felicity.
 Sweet Sultan Flower, widowhood.
 Sweet William, gallantry; fineness; a smile.
 Sycamore, curiosity.
 Syringa, memory.
 Syringa (Carolina), disappointment.
 Tamarisk, crime.
 Tansey, I declare against you.
 Tendrils of Climbing Plants, ties.
 Tigerflower, for once may pride befriend me.
 Thistle (Common), austerity. Emblem of Scotland.
 Thistle (Fuller's), misanthropy.
 Thistle (Scotch), retaliation.
 Thorn Apple, deceitful charms.
 Thorns (Branch of), severity.
 Thrift, sympathy.
 Throatwort, neglected beauty.
 Thyme, thriftiness.
 Tiger Flower, for once may pride befriend me.
 Touch-me-not, impatient resolves.
 Toothwort, secret love.
 Traveller's Joy, safety.
 Trefoil, revenge.
 Trumpet Flower, fame.
 Tauffe, surprise.
 Tuber Rose, dangerous pleasures.
 Tulip Tree, fame.
 Tulip (Red), declaration of love.
 Tulip (Variegated), beautiful eyes.
 Tulip (Yellow), hopeless love.
 Turnip, charity.
 Tusilage (Sweet-Scented), justice shall be done you.
 Ulex, humility.
 Valerian, accommodating disposition.
 Valerian (Greek), rupture.
 Venus's Looking-Glass, flattery.
 Verbena, sensibility.
 Vernal Grass, poor but happy.
 Veronica, fidelity in friendship.
 Vervain or Verbena, enchantment; sensibility.
 Vetch, shyness.
 Vine, intoxication.
 Violet (Blue), faithfulness in love.
 Violet (Dames), you are the queen of coquettes.
 Violet (Purple), you occupy my thoughts.
 Violet (White), innocence; modesty.
 Violet (Wild), love in idleness.
 Virgin's Bower, filial love.
 Virginian Spiderwort, momentary happiness.
 Wallflower, fidelity in misfortune.
 Walnut, stratagem.
 Water Lily, purity of heart.
 Water Melon, bulkiness.
 Wax Plant, susceptibility.
 Weigela, accept a faithful heart.
 Wheat, prosperity.
 Whin, anger.
 White Jasmine, amiableness.
 White Lily, purity and modesty.
 White Mullein, good-natured.
 White Oak, independence.
 White Pink, talent.
 White Poplar, time.
 White Rose, death preferable to loss of innocence.
 Whortleberry, treason.
 Willow, French, bravery and humanity.
 Willow, forsaken.
 Willow (Herb), pretension.
 Willow (Water), freedom.
 Willow (Weeping), melancholy.
 Winter Cherry, deception.
 Wisteria, I cling to thee.
 Witch Hazel, a spell.
 Wolfsbane, misanthropy.
 Woodbine, fraternal love.
 Woodruff, modest worth.
 Wood Sorrel, joy, maternal tenderness.
 Wormwood, absence.
 Xeranthemum, cheerfulness under adversity.
 Yew, sadness.
 Zephyr-flower, expectation.
 Zinnia, thoughts of absent friends.

NATIONAL EMBLEMS

- France.—The Fleur-de-Lis.
 England.—The Rose.
 Scotland.—The Thistle.
 Ireland.—The Shamrock.
 Wales.—The Leek.
 Egypt.—The Sacred Lotus.
 Germany.—The Cornflower.
 Italy.—The Lily.

FORMS

FOR CHEQUES, BILLS, RECEIPTS, etc.

CHEQUES

Ordinary form of a cheque or order on a bank for the payment of money to the holder :

London, March 1, 1910.

To Parr's Bank, Bath Lane, E.C.

Pay to , or bearer, Eighty-nine pounds fourteen shillings and sixpence.

£89 14s. 6d.

LOCK, SMITH and Co.

Every cheque must bear a penny stamp, payable by the person or firm by whom the cheque is drawn. When the words "or Order" are substituted for "or Bearer," the cheque must be endorsed by the person in whose favour it is drawn. Crossed cheques must be presented through a bank. The most common method of crossing a cheque is to draw a couple of lines about half an inch apart across its width, and write within them the words "and Co."

RECEIPTS

London, March 1, 1910.

Received, of Messrs. Lock, Smith and Co., the sum of Fifteen pounds eight shillings and ninepence.

£15 8s. 9d.

JAMES H. MURGATROYD.

All receipts for two pounds and upwards, whether for money paid on account or in discharge of all demands, must bear a penny receipt stamp, payable by the person by whom the receipt is given. The receipt stamp must be cancelled by writing across it. Persons who attempt to evade payment of this duty in any way are liable to a penalty of £10.

When a receipt is given for money paid on account, the words "On Account" should be added.

RECEIPT FOR RENT

London, April 4, 1910.

Received, of Mr. Alfred Jones, Twenty pounds, being one quarter's rent due on March 25th last (or Lady Day last) for the premises occupied by him at No. 54, Chester Square, N.W.

£20.

RICHARD STEVENS.

BILLS.—AN ACCEPTANCE

£59.

due April 20.

London, January 17, 1910.

Three months after date, pay to my order the sum of Fifty-nine pounds, value received.

To Mr. William Smith, 353, Fleet Street, E.C. ABRAHAM JONES.

The bill thus drawn by Abraham Jones on William Smith, must be accepted by the latter by writing his name *across* the document. Hence he is termed the acceptor of the bill. The place, whether it be a bank or house of business, or even a private residence, at which the bill is payable should be written by the acceptor below his name. If Mr. Abraham Jones, who is called the drawer of the bill, wishes to make use of it, he endorses the bill—that is, writes his name *across* the back of it—and thus it becomes negotiable paper.

A PROMISSORY NOTE

£59.

due April 20.

London, January 17, 1910.

Three months after date, I promise to pay to Mr. Abraham Jones, or order the sum of Fifty-nine pounds, value received.

WILLIAM SMITH.

The place at which the bill is payable may also be stated. No signature is written across the promissory note, as in the case of an acceptance. It must be endorsed by the holder of it when he wishes to make use of it, or to pay it away.

Bills are sometimes drawn at sight, or at so many days after sight, e.g.—

£100. London, March 1, 1910.

Ten days after sight, pay to my order the sum of One hundred pounds, value received.

To Mr. Samuel P. Grant, 19, Perth Street, Edinburgh.

ARTHUR WILSON.

A bill of this kind requires to be sent to the person on whom it is drawn to be *sighted*. To do this, the person in question must accept it by signing his name, and adding the date at which he has done so.

FORTUNE TELLING

Few persons are entirely free from any superstitious ideas, though many that scoff at the idea of fortune telling by cards or hands. Yet there is much character expressed by the hand and its indents, and those clever in reading the lines may form a very fair judgment of a person's attributes by a careful study of their palms. The contour of the fingers, the softness or hardness of the texture of the skin, all help the intelligent reader.

And what character is expressed in shaking hands. There is the awkward shake that shows lack of education and breeding, the loose clasp of laziness and inertness, the touch of coldness, and the wafm, firm grasp of friendship or interest. A hand-shake is a wonderful index of character, and almost equally so are the lines of the hand and the shape of the fingers.

Long hands, generally considered the most beautiful, show more intelligence than short ones, and to them are attributed capabilities for detail and perseverance to overcome difficulties.

A short hand is generally owned by a person of warm affections and hasty judgment.

A firm and rather hard hand should belong to one possessed of energy and determination.

Limp, loosely made hands almost always denote lack of energy.

Rough, knotted hands denote reflection, order and intellect.

Smooth hands should belong to those who are quick to discern and impressionable.

To each finger the name of a god is given—to the first Jupiter, the second Saturn, the third Apollo, the fourth Mercury.

Jupiter, the first finger, if long, indicates an economical, thoughtful disposition; square, truthfulness; pointed, sensitiveness and quickness of intellect.

Saturn, the second finger, if pointed shows a frivolous nature; if square, a prudent one.

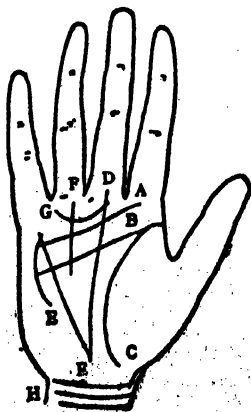
Apollo, the third finger, if square, denotes a reasonable, truthful nature; if pointed, artistic feeling; and if blunt and spade-shaped, dramatic and musical talent.

Mercury, the fourth finger, if pointed, shows eloquence; and if square, good judgment; if it is straight, honourable feeling.

The thumb denotes love, will and judgment, according to its development. The first joint shows will, the second judgment, and the lower part affection.

A hand that, when held open has the fingers well apart, shows originality, independence and self-reliance.

Fingers that may be termed cushioned at the inner side of the tips show delicacy of touch.



EXPLANATION OF DIAGRAM.

- A. Line of Heart. E. Line of Health.
- B. Line of Head. F. Line of Apollo.
- C. Line of Life. G. "Girdle of Venus"
- D. Line of Fate. H. The Racette.

The lines on the hand indicate character and fortune. The line of life, if long and deep, shows that the life should be long and free from illness; if short, and faintly marked, the reverse.

The line of mind, or head, as it is sometimes called, should be even, narrow, and long; and if well separated from the line of life, the character should be self-reliant and strong.

The line of heart, if of a dark colour and deep, indicates true affection.

The line of fate should indicate the destiny of the owner. If it comes from the line of life, good fortune may be predicted; if from the lines at wrist, some strange fate or uncommon life.

The line of fortune shows worldly fame, riches, and honour, if it be deep and high at the bone of the third finger.

The lines at the wrist, generally denominated bracelets, show: the upper one, if well marked, good health; the lower one, happiness.

FORTUNE-TELLING FROM THE TEACUP

The residue at the bottom of the cup, after the tea has been drunk, is well shaken about, and then the cup reversed in the saucer. The tea-leaves adhere to the sides and bottom of the cup and there form resemblances to certain objects and signs. From these shapes certain happenings are supposed to be fore-casted. For example, if the leaves form something like a letter of the alphabet, it is supposed to foretell the receipt of a letter and the initial of the sender; if there seem to be lines, they indicate a journey. A ring signifies marriage, and if there is a letter also in the cup, it foretells the initial of the party to be married. If the leaves form in the shape of flowers, such as a lily or a rose, they have the same signification as the flowers themselves, i.e., a lily would denote a clear time and happiness ahead; a leaf of clover (a lucky sign), would foretell good fortune. A wormlike sign, reminiscent of a serpent, would warn one of danger from friends. A tree-like form, if falling over, would denote

sickness, and if upright, good health. A cloudy effect, if heavy, means trouble, or happiness if very faint. If the signs are at the bottom of the cup the happenings will take place immediately. The further away they are from the bottom of the cup the further away is the fulfilment of the prognostication.

FORTUNE-TELLING BY CARDS

Take from the pack the four Aces, Kings, Queens, Knaves, Tens, Nines, Eights and Sevens. Shuffle the cards well and then cut them into three packs; take up the first pack and turn up the cards in threes. When the three cards are all of the same suit, lay them out in a row on the table; when of three different suits, put them aside; if there are two of one suit and one of another, take the highest of the two and lay it alongside those already out. When the first pack is used deal with the second and then the third in the same manner. When you have come to the end of the three packs, gather the cards that have been discarded, shuffle them and cut the pack into three, and turn up by threes again in the same manner as before. This must be done three times. The third and last time the person shuffling the cards must take out and add to the "fortune" row a card which is supposed to represent the person whose fortune is being told. If it be a dark lady or gentleman whose fortune is being told, use the Queen or King respectively of Spades or Clubs, and if required to represent a fair lady or gentleman the Queen or King of Hearts or Diamonds respectively; also set aside the Ace of Hearts, which represents the house, and the nine of Hearts, which is the wish card, unless these cards already appear in the "fortune" row. The cards that have not come out are now placed aside and the fortune of the shuffler of the cards is told in the following manner. Count from the card representing the person whose fortune is to be told and read every seventh card backwards and forward, then count from the "house" (Ace of Hearts) in same way, then from the "wish" (nine of Hearts).

After counting, take the first and

FORTUNE TELLING

last cards away from those laid out and read. Suppose the first is the Ace of Clubs, and the last the ten of Clubs, that would read "a letter with unexpected news." Now take the first and last card again, say nine of Diamonds and ten of Hearts, that would read "Money from a big house, or a present." Keep taking up first and last cards until all are gathered up, now shuffle and cut as before and deal them out one at a time into four lots; the first "What you don't expect," the second for the house, the third for yourself, and the fourth True Fortune. This last must only contain two cards, i.e. the first and last dealt.

NAMES OF CARDS.

Ace of Hearts . . . *The House.*
King of Hearts . . . *Fair Gentleman.*
Queen of Hearts . . . *Fair Lady.*
Knave of Hearts . . . *Fair Young Gentleman.*

Ten of Hearts . . . *A big house.*
Nine of Hearts . . . *The Wish.*
Eight of Hearts . . . *A Good Heart.*
Seven of Hearts . . . *A Faint Heart.*

Ace of Diamonds . . . *Ring or present.*
King of Diamonds . . . *Fair Gentleman.*
Queen of Diamonds . . . *Fair young Lady.*
Knave of Diamonds . . . *Fair Young Gentleman.*

Ten of Diamonds . . . *Business.*
If Ace and Ten
come together . . . *Marriage.*
Nine of Diamonds . . . *Money.*
Eight of Diamonds . . . *Rise in Life.*
Seven of Diamonds . . . *Mischief.*

Ace of Clubs . . . *A Letter.*
King of Clubs . . . *Dark Gentleman.*

Queen of Clubs . . . *Dark Young Lady.*
Knave of Clubs . . . *Dark Young Gentleman.*

Ten of Clubs . . . *Unexpected News.*
Nine of Clubs . . . *A Journey.*
Eight of Clubs . . . *An Annoyance.*
Seven of Clubs . . . *Tears.*

Ace of Spades . . . *Sickness.*

If this comes with
ten of Spades . . . *Death.*
King of Spades . . . *Very Dark Gentleman.*

Queen of Spades . . . *Very Dark Lady.*
Knave of Spades . . . *A Young Man not to be Trusted.*

Ten of Spades . . . *Unpleasant News.*
Nine of Spades . . . *Disappointment.*
Eight of Spades . . . *Slight Illness.*
Seven of Spades . . . *Feeling and confusion.*

If the following appear in the fortune line they foretell:—

3 Sevens *A Removal.*
3 Tens *A Great Surprise.*
3 Jacks *Some Knavery or mischief making.*

3 Queens *A Quarrel.*
3 Kings *A Law Suit.*
3 Aces *A Surprise (pleasant, unless the ace of Spades is one of the three).*

If the cards representing the person whose fortune is being told comes among several picture cards, it means that he or she is going into company, unless the three Kings—a law suit—are amongst them.

THE WIND

From figures kept by order of the Royal Society it has been calculated that the wind blows from various quarters in about the following proportions:—

South-west	112 days.
North-east	58 "
North-west	50 "
West	53 "
South-east	32 "
East	26 "
South	18 "
North	16 "

It also shows that the wind blows from the west longest in July and August; from the north-east most constantly during January, March, April, May, and June, and most seldom during February, July, September and December; and that the north-west wind blows oftener from November to March, and more seldom during September and October than any other month.

FURNISHING AND HOME-MAKING

HOUSE-HUNTING

The first essential in choosing a house is consistency; the second (when economy has to be studied), the distance from the bread-winner's place of business. The choice should be a matter of calm deliberation. When possible it is well to view the house on a dull, bleak day. It is so easy to see a rosy picture on a sunny one. It is a wise plan for the house-mistress, when able to do so, to spend a quiet hour alone in the empty house.

It is well, therefore, to be prepared with stool, notebook, and measuring tape, and to deliberately sit down (alone if possible), first in one room, then in another, and think the matter out.

One should lose all sense of the present, and try to picture the future. What would that fair out-look be like in drifting snow, or heavy rain? Would that gem of a drawing-room catch all the fumes of the cooking? Would the clatter of pails and cans, and the unmusical voices of the maids, be wafted in from that little back-yard, and help destroy the sacred quiet of one's resting-life?

How is the house situated as regards its nearness to a church or a doctor? In the country these are serious, but often unconsidered details. Of course, where money is very scarce, the rental is the one supreme point to be considered, and other things must go.

Aspect is of utmost importance in house-choosing. There should be no north sleeping or living rooms, where it is possible to avoid it.

A house should not stand on a slope with the ground rising abruptly behind it; more especially if the soil is either chalk or clay; for this usually ensures a damp dwelling-place.

The cellars should receive attention, for on these a house depends greatly for its comfort and healthiness.

The ventilators, or air-bricks, in the foundation of the house should be carefully examined. The thickness of the walls should be ascertained, and the construction of them studied.

The system of drainage should be thoroughly gone into, also the position and height of the ventilating shafts; these may prove most dangerous, if badly placed.

The water-supply should also be traced, and fully inquired into, and—a thing which is so often overlooked—the aspect of the larder windows should be carefully noted. Too often they look out into a back court, which is frequently a covered one, and directly facing the coal cellar, servants' lavatory, etc.

When practicable, it is wise for the intending tenant or purchaser to take a lodging in the immediate neighbourhood of the house before making a final decision. Many people (especially women) cannot be in good health while living on a chalk soil. Chalk holds the damp, it also retains heat, consequently, it is both the coldest and the hottest of dwelling-places, according to the season.

For real healthfulness and beauty of surroundings green-sands and clay are best; after them, gravel and sand.

The hopelessness of a chalk garden seems to emphasize this theory.

Leases should never be signed rashly. Every word of their composition should be studied, unless the landlord is a man well known to the tenant.

Whether for a three-years' agreement or for a regular lease, it is always safer to hire on what is known as a repairing lease. By this arrangement the tenant pays a settled sum on his rent yearly, to cover the cost of repairs, and for the re-decoration of the house when his tenancy has expired. It is a good principle, for those who hire on

the usual plan, to refuse to sign a lease which sets forth that the tenant shall leave the house in good and sufficient repair. "Sufficient" is a term which may be stretched in a most alarming manner, until it is made to cover almost anything, just according to the grasping nature of the house owner. It may mean wall papers at an extravagant price, and everything to match.

The safest lease to sign is one which states that the tenant shall leave the house in "tenantable" repair. Another point worth remembering is, that all discussions on the subject of repairs, or other house questions, such as tenant's fixtures, etc., should be decided absolutely whilst the tenant is still in possession.

HARMONY AND LIGHT

The harmony and colouring of rooms has a strong influence on people who are sensitive to their surroundings.

The drab distemper, generally used for walls in school-houses, has been known to have such a numbing effect on the minds of children, that teachers have petitioned to have the rooms distempered in a brighter tone.

A peacock-blue room, for example, is very gloomy and heavy.

Certain colours absorb the light, and are most depressing and cheerless in consequence.

The future inmates of a house should be duly considered in the furnishing scheme. They should fit the rooms and the furniture as a picture fits its frame.

The members of some families are all tall and broadly built, and people of this type look truly absurd when cooped up in a little doll's house of a place, all fripperies and dainty prettiness, without one atom of solid comfort about it.

A long-bodied man squeezed into a short-seated lounge chair is anything but a charming spectacle; and large people packed closely together in small and over-decorated rooms are bound to be both unhealthy and unhappy.

Space is an indescribable luxury and comfort in a house; yet people are so short-sighted that they will cheerfully sacrifice it for the sake of moving

into a slightly more fashionable locality.

In choosing colour and design for wall-paper, carpet, or hearth-tiles, keep firmly in mind the fact that these designs will be placed near together in the same room, and be very sure that they are calculated not to quarrel, nor mar each other in any way.

If the carpet, wall-paper, or paint in question, is for a room where the furniture and hangings are not in their first youth, that fact should be remembered.

Furniture which will look respectable against the mystery of a low-toned wall, loses all its charm when its shabbiness is shown up against a light carpet or paper.

BEDS AND BEDDING

The art of making old things new is a very delightful and useful one; it would be more frequently practised if the pleasure resulting from it were more fully grasped.

A chair, a couch, or even a mattress, which has been successfully treated at home, becomes quite a little landmark for the future, and helps to make the home more really home-like.

The re-doing of old things calls forth the inventive faculty which lies dormant in the minds of so many women, and proves a really satisfactory and invigorating occupation.

A thoroughly good bed, or a poorly planned one, will make or mar any class of bedroom.

For health and comfort, nothing surpasses the wire-woven spring mattress; it can be so cheaply obtained, and is such an immense saving to the housewife, that there is no excuse nowadays for suffering discomfort in this respect.

Box mattresses are things now almost of the past; very cumbersome and costly they were, though most comfortable.

A feather-bed laid upon a wire-woven mattress is not a thing to be despised.

The orthodox mattress of hair or flock (or a mixture of both) when placed upon the wire-woven one, forms quite the most simple and sanitary of beds.

Many housewives have a mistaken notion that by piling one mattress upon another, they are improving the wire-woven arrangement, when the fact is that they are spoiling the whole comfort of the bed. Only one mattress should be laid upon the wire one, and that mattress, needless to say, should be in first-rate condition.

MATRESSES, TO RE-MAKE

Young housewives should have their mattresses re-made at home periodically, and personally direct and superintend the doing of it if they are not capable of actually carrying out the work themselves.

A double-bedded mattress is rather a "facer" for a woman to attempt alone, but if she follows our directions closely, she will be able to manage even the largest of double-bedded ones unaided.

When practicable, it is well to begin the preparations out of doors, or failing space, the mattress can be placed on to a dust-sheet on the floor of an empty room. One side of the mattress must be ripped, and the hair or flock should be taken out piece-meal. When this can be done in the open air, even in a back court or area, matters are greatly simplified.

Each piece of hair or flock must be taken separately (as much as the two hands can hold) and be well shaken in the air, and then pulled absolutely apart, so that each strand should be separated.

If the hair shows sign of moth, or has at all a musty or unpleasant odour, that portion must be put into a pail and scalded, by having boiling water poured upon it. It must then be lifted out, drained, and partly dried on sheets of paper over the kitchen-range or in the sun; it should be finished by being first well tossed and afterwards baked in a moderate oven.

It is useless to talk about a brick or bread oven in these days, but where there is such a thing, the whole of the mattress filling may be baked in it with advantage. The next best plan (failing a large oven) is to bake portions of the hair and allow the remainder to lie out in the sunshine.

The ticking, or mattress casing,

should next receive attention; it should be well washed, and wrung out in starch-water, and afterwards mangled. Any small rents in the casing must be neatly repaired. The hair must then be replaced, the hand should be inserted, and the hair or flock evenly worked into the corners and all over the surfaces of the mattress. The ripped portion should be then re-sewn, and neatly bound over.

The next process is rather a tiresome but most necessary one. A long upholsterer's needle should be procured from the ironmongers, also a ball of medium upholstery twine. This is finer, stronger, and more twisted than the ordinary sort. If there is difficulty in procuring it, the work can be carried out fairly well with ordinary string of good quality.

The needle should measure about six inches in length, and have a long narrow eye. It should resemble a gigantic darning needle. Do not be persuaded into buying curved needles, they are useless for mattress work.

Having procured the needle and twine, take a long piece of the latter and make an honest knot at one end. Begin at one corner of the mattress, pinch up a piece of the "siding" part of the mattress with part of the surface itself together in one hand. Insert the needle into the "siding" piece, about two inches from the bound edge. Drive the needle well into the mattress itself, and bring it out on the top side, several inches away from the edge. Pull the needle quite through, then insert it again, in the self-same hole, so that no stitch shall be visible on the top side of the mattress. Bring it out of the "siding" part once more, about half an inch from its first insertion. Tie the knot neatly, so that it shall form the first stitch, and continue in the same manner right around the mattress, drawing the twine fairly tight. Make the stitches come in an even row along the siding piece, they should be about two inches apart, and should measure half to three-quarters of an inch in length.

When you have completed the top side of the mattress, turn it over, and proceed in exactly the same manner on the other side, remembering that the

stitches must be kept just at an equal distance from the edge. This serves to keep the mattress in shape and quite firm at the edge, as nothing else can.

The "tufting" is the next process. This is generally carried out with small rounds of leather, which need renewing when the mattress is re-made.

Most bootmakers would supply waste scraps of the leather with which boots and shoes are lined. With a sharp pair of scissors it is quite easy to cut this leather into rounds. They should first be marked out from a paper pattern with a pencil, as a guide, for it is on these trifling details that the home-wrought or business-like appearance of a mattress greatly depends. Each round should be perfect and exactly alike, both as to shape and size. If the leather for forming these rounds is difficult to obtain, they may be cut out of double American cloth, or tufts of wool may be used; these can be formed by winding coarse wool over a piece of cardboard, and then tying it strongly at one end with thread, afterwards cutting and fringing it out. This will make a fair substitute, but the leather is far more business-like and durable.

The mattress should be stabbed through in alternate rows, about six inches apart, the stabs so disposed that they shall form diamond shapes. It is a wise plan to measure from the top and side of the mattress, and mark with a pin or a pencil where the stabs are to come. Then having threaded the needle with twine, and fixed one leather round firmly with a knot, the needle should be stabbed quite through the mattress, and through another leather round, placed on the opposite side of it. It is then passed back through the leather a second time, and tied firmly on the round where it was first inserted. When pulling up the twine a good deal of firm pressure should be used, so that the stabbing may be kept firmly and deeply in position.

When the mattress is of a very large size, or is intended for a double bed, this part of the work becomes very difficult, as a woman's arms are not long enough to reach across the width of the mattress when stabbing it.

Under such circumstances it is well to fix two strong loops on to the two top corners of the mattress, and fasten them firmly to the highest part of the iron or wood-work forming the head of the bed.

If the bed should be what is known as a half-tester, this will be a still more simple matter, and when the mattress is firmly fixed at the head, it can be secured lower down by the opposite corners, and then the worker only has to lie flat beneath it and push the stabbing needle through those parts which would otherwise be quite out of her reach. A mattress treated according to these directions will very well repay all the labour and time spent upon it by the home-worker.

SPOTS AND STAINS

For a stain of any character, on the bedding of children or adults, mix a handful of starch smoothly in a basin with cold water until it is of the consistency of cream; pour this carefully and slowly on to the stain until it can absorb no more. Leave the mattress in a warm place, flat on the floor in front of a fire by preference. Wait until the starch has dried (it will not take very long), then break it up with a spoon and beat and brush it well out of the mattress. If the stain is trifling, one application will be sufficient, but if it is a serious stain (such as is sometimes seen on a child's bed for instance), the starch must be poured on again and again, until, when it sets, it shows perfectly white; this will be a test that it has drawn all impurity from the bed.

For stains in carpets, ink stains or others, a lemon cut in half and rubbed well on to the spot with one hand, whilst the other holds a soft cloth, with which the carpet is dabbed after each application, is one of the best remedies.

If the stains are of ink, or the result of an operation or illness, the lemon should be dipped in plain salt each time it is rubbed across the stain. This has a wonderful influence on those which at first appear quite hopeless.

For drops of candle fat, the old plan of a sheet of brown paper and a hot iron is quite the most perfect.

The marks made by hot or sticky

little hands on wall paper, etc., may be removed by carefully rubbing with either dough or stale bread, rubbing always in the same direction.

For every description of grease mark a careful dabbing with benzoline is usually a satisfactory and inexpensive remedy.

FLOOR STAINING AND SUR- ROUNDS

It is impossible to keep a floor free from dust if the carpet fits closely up to the walls. When the house is a fairly well-built one, the plan of staining and varnishing a margin of the boards, and having a square of carpet kept in position by brass-headed pins (sold for the purpose) in the middle, is to be preferred.

For cheapness and durability, a surround of good oil-cloth or linoleum is best.

Straw-mattings, Indian or Chinese, and felt, although exceedingly nice looking, are not suitable for sleeping-rooms. People fail to realize how much more dust arises in a sleeping than in an ordinary living-room, and how absolutely important it is that the air breathed in at night should be pure and free from anything obnoxious. The daily making of the bed alone creates much dust; also the taking on and off of garments, especially those which have been worn out of doors.

The surround, if formed of any substance more impervious to dust than either oilcloth or linoleum, becomes simply a dust-trap, as it is impossible to take it up and cleanse it frequently.

On this account great care should be taken in the exact cutting and fitting of the surrounds, so that there shall be no facility for the collection of dust beneath them. It is now possible to obtain both oilcloth and linoleum in quite artistic shades and designs. The most suitable is either one which resembles Indian matting, or one showing the graining of various woods.

If the skirting and flooring fit badly, the oilcloth chosen should be thicker in consequence.

The width of the surround having been determined, the material should be carefully measured, and ruled along the back; it should be fitted into the

corners of the room, and carefully mitred off with rule and pencil, so that no over-lapping edges or unworkman-like inequalities should be visible. A few carefully placed tacks will suffice to keep the surround firmly in position. Where this is possible, it is as well to allow a surround to extend a few inches beneath the edge of the carpet all round: should the substances be equally thick, they can be fixed to meet exactly edge to edge.

There are many different ways of treating the boards when the room is one which will prove comfortable without a surround. Quite the most durable stain is without doubt the real old-fashioned oil oak stain, which may be procured from any decent oil shop.

It should be varnished, and though somewhat costly, it will look and wear better on ordinary boards than any other sort of stain.

For corridors, stairways, and portions of flooring, which do not get much wear, the plan of varnishing saves time and labour. For sleeping-rooms, and ordinary living-rooms, it is better to have the staining unvarnished, and kept bright by an application (once a week is often enough) of floor wax, which is really the old-fashioned beeswax and turpentine, put up in a less tiresome and more convenient fashion.

For proper staining, the floors should first be thoroughly scrubbed with soap and water, then, when dry, they should be brushed over with hot size—this may be bought in packets in the form of concentrated size, which is in dry powder, and a more cleanly and convenient preparation than the usual one in jelly^o; it is sold by the pound. In either case it must be dissolved, and applied with a paint brush, a broad flat one is the best shape. The application of the size must be rapid, for if it begins to cool it will congeal, and set in lumps on the boards. When this is the case, the bowl containing the size must be set in boiling water, or for a few minutes on the kitchen range, or inside the oven, until it has become thoroughly liquid.

The number of coats of size required must depend upon the age and state of the boards themselves, some being much more absorbent than others.

The chief thing to remember is, that each coat must dry thoroughly before another is applied. One night is a sufficient time to properly dry either.

When varnishing, care must be taken that no dust is allowed to settle on the varnish. This should be used rapidly, and is better done when the room is rather warm; draughts must be avoided whilst the varnish is becoming dry.

It is possible to obtain stain ready mixed with varnish, which can be applied to the wood without first using size. This sort of stain will not last as long, nor look so well as the first-named one.

There are also water stains which can be used for floors; they are easily applied, but the effect is not very good, unless several coats are brushed on.

One of the best and cheapest of these is made by pouring boiling water on to crystals of permanganate of potass.

When this stain has thoroughly dried into the boards, it may be polished with beeswax and turpentine, or floor-wax.

When the boards are in bad condition, it is well to rub them down with the coarsest sand-paper before applying the stain.

When the boards have open spaces between them, it is essential that they should be filled up before the stain is applied.

One method is, to split up a piece of wood and shave it until it is like a wedge. These should be fitted into the cracks between the boards; then with a hammer they should be knocked in between them, and afterwards smoothly planed off.

A much simpler plan is to tear up some thin paper and mix and beat it into a pulp with hot starch. This can be easily pressed into the cracks with a glazier's knife.

Another treatment is a mixture of putty or plaster of Paris with some of the oak stain, though this is not so satisfactory as the first method.

Stains can also be procured in the various subdued shades for colouring woods; some of these have a charming effect, notably the green shades.

Surrounds may also be painted with good effect, but the paint wears off,

and frequently needs retouching, and is less satisfactory than staining.

BACKGROUNDS

If the home-worker has a fair number of pictures and decorative works of art, and the rooms are not very large nor lofty, walls which are either perfectly plain, or have such a faintly-shadowed design that it is almost imperceptible are best.

It spoils pictures to hang them on a surface which is blossoming with ornament. Works of art only mar such a background, and vice versa. A self-tinted wall emphasises their beauty, and the rest to eye and brain is considerable.

Turquoise is a safe choice to make for a restful background. There is a middle tint also, more green than blue, which is full of charm, and shows up old oak, bronzes, etc., to perfection. Faint sage-green is also genial and kind to pictures, and pale rose-pink is a loving shade for a boudoir or drawing-room.

A slight knowledge of art is useful when buying even quite plain tiles; it is well to look them up, and deliberately choose them oneself.

A mass of plain colour is no comfort to the eye. Just for the same reason that when placing a background of stained glass in a window, the fragments should be cunningly chosen, and of varying shades of the same colour, so should the colours of the tiles be shaded to produce a good result. In firing the tiles the colours sometimes "run," and these are the tiles which are generally condemned by the ordinary builder, but commend themselves strongly to the person of artistic perception.

It is a great rest to eye and brain to be able to live without a jumble of flowery and geometrical design trailing up the sides and across the front of the hearth.

It is quite unnecessary to have tiles with designs at all in the ordinary home. Unless they are expensive, and the design carefully produced and thoroughly good, it is much safer and more satisfactory to choose the self-coloured tiles. They are always comfortable to live with.

ODDS AND ENDS FOR SLEEPING-ROOMS

When money is scarce, and certain things in the way of furniture cannot be procured, a little ingenuity will go a long way.

Both washstand and dressing-table may be formed by fixing large shelves made from any spare boards (bracket-like) against the wall or in the corner of a room. When the shelf is fixed against the wall, a narrower one should be fitted beneath it, and quite a narrow one again, at a good height above the principal one. This will be invaluable for holding various toilet requisites; the undershelf is also most useful from several points of view.

In small rooms the corners of furniture are always a difficulty. In our home-made arrangements, these can be rounded off with good effect.

The dressing-table shelf may be draped or hung with short curtains to conceal the boots and shoes which stand on the smaller shelf beneath. The top one may be covered with any suitable material, or it may be enamelled or painted, and decorated in various ways.

The washstand can be covered very neatly with white oil-cloth, or what is far better than anything else, with tiles. They can be bought very cheaply in self-colours and simple designs.

The top of the washstand must first be spread with plaster of Paris, made very moist with size. On this the tiles must be laid and pressed very closely together, and kept down with weights until they have adhered rigidly to the surface.

A grooved edging of wood can then be fixed all round the extreme edge; this various in width, and is similar to that which is used for making small picture-frames; a split bamboo will also serve the same purpose.

The space between the washstand shelf and the small shelf above, may be covered plainly with oil-cloth, or other suitable material, which will agree with the rest of the decorations.

It is a great improvement if the sides of this screen are finished off with a length of narrow wood edging, or split

bamboo; a piece of the same may run along the back of the little top shelf with good effect.

It is very convenient to have a small mirror fixed high enough to be comfortably looked into, above the washstand shelf. These can be purchased very cheaply, and may be simply draped or decorated in many ways. It is impossible to cleanse one's face or teeth if one is, in a sense, "in the dark."

The dressing-table may be made to look quite artistic by being draped along the front, if the draping is brought up and continued at the back, until it reaches the narrow little shelf above.

This again may be backed by a handsome strip of embroidery, or anything similar, and would make a good decorative feature.

People seem frightened of shelves; yet they are really harmless, cheap, useful and decorative.

When the room demands it, the drapery can be drawn emphatically to one side, curtain fashion, and a width of contrasting shade may fall straight down from the opposite side. The ends of such drapery, if sufficiently long, can be turned to good account by being brought along the edge of the mantelshelf, in an unstudied way. When the mantelshelf is formed of metal or marble, it is sometimes difficult to fix a drapery without covering the shelf. It is always a waste, and a mistake to do this. Almost any material will become dusty and shabby quickly if stretched on a shelf above the fireplace, and it is difficult to make objects stand firmly and safely on cloth or serge. If two or three small nails are driven into the wall close to the mantelpiece, at the back, and very thin wires of steel or brass are twisted round the heads of the nails and brought straight across the shelf, towards the front, they will be almost invisible. Then a length of broad, firm tape must be nailed tightly on either side of the shelf, and drawn flatly around the extreme edge; the ends of the wires must be fixed into the tape at intervals, and the result will be an almost invisible support, which will stand any reasonable amount of draping and manipulating.

WARDROBES

One of the most expensive items in the furnishing of a bedroom is the wardrobe. It is an important one, for clothing will not continue to look respectable when it is hung up on doors or pegs, exposed to dust and air.

The plan of having a curtain fixed across the corner of a room, with a covered board and valance (which also serves for a shelf) across the top, answers fairly well for a temporary arrangement, but after a little while dust works under the curtain, and the mischief begins.

The plainest little wardrobe of polished, stained, or painted wood, is somewhat costly, especially when it is of a useful size. It is impossible to hang out clothing easily and fully in a limited space. The inexpensive wardrobe is too narrow to accommodate trimmed skirts and evening dresses advantageously. The generous wide-winged wardrobe is both expensive and cumbersome, and it demands too much space in a small bedroom. The most serviceable and the cheapest form is a variation of the frame wardrobe; this can be made from measurements by any village carpenter. Far from being unsightly, such a wardrobe can hold its own in any room, if daintily hung with chintz, or other material, which will harmonize with the general tone and style of furniture. The frame can be formed of any sort of wood, and looks exceedingly well when stained either green or brown, and varnished or polished. It may be made of deal, which is the least expensive, and simply varnished. This can all be done by the home-worker herself.

The racks for pegs hooks, etc., are the next consideration; it is well to have two rows of hooks, one high up for skirts, a lower one for bodices. A brass, iron, or wood rod can be run from end to end, across the middle of the top frame; on this a row of brass hooks, which will slide along the rod, can be fixed. This will prove a most useful addition, and prevent the necessity of hanging the dresses crowded one upon the other. Along the two sides of the wardrobe can be fixed moveable rods, with hooks at various heights. These are most useful; from them can be hung many small things. The

doors should be made fast by having a brass bolt on the top and bottom on the left-hand, and a small knob with catch on the right-hand one, with a lock beneath it.

When the lining of the wardrobe is complete, the woodwork may be decorated in various ways. Slight designs may be drawn on the woodwork itself, and grooved out with a carving tool, afterwards worked out in sepia or gold; or the woodwork itself may be decorated with poker-work, or painted flatly to imitate inlaid wood; in simple designs, it can be stained any colour.

CHOOSING FURNITURE

Really good furniture can now be procured at very moderate prices. For those who can afford to buy it new, it is far cheaper, and every way better, to go to one of the large London houses, and after a careful inspection choose as many articles as possible at the same place.

It is far less distracting for the buyer when several things are obtained under the same roof; it is very helpful to be able to go back again to another department and take one more glance at the articles chosen before deciding on something which will possibly have to go in the same room, or at close quarters with it. A better sense of proportion and fitness is also gained in this way.

Young people when starting house-keeping on small means sometimes dread going to a really "swagger" house to ask for their simple requirements.

One has proved over and over again—and would like to emphasise the fact—the extreme wisdom of going to the very best places possible when furniture and carpets are in question.

For bedroom use, there is nothing safer to choose than white enamelled furniture; it is so clean looking, and altogether charming, and if a fair sum can be paid for it, some of the designs are perfect.

One of its attractions is that when it has become a little worn it can be re-enamelled at little cost.

The washstands enamelled pure white, with grey stone tops and backs, are beautiful. The plan of having a back formed by a long square bevelled

mirror, swinging in the washstand, is a good one. The glass prevents splashes being made on the wall, and does away with the unsightliness of wicker and other splash-boards.

For a small bedroom nothing is more convenient than the dressing-chests, which are now becoming so general. They are, without doubt, the most delightful of space-savers. The top of the chest of drawers is fitted as a dressing-table; it is also planned to serve as a chest of drawers, dressing-table and washing-stand. The top and back are formed of granite or grey stone; the mirror is fixed at the back, and a space with a shelf is left between the drawers, which makes it much more comfortable and easy to get at the mirror than the usual plan.

Book-cases and couches, and lovely little tables, can be obtained most inexpensively.

Small bedroom chairs of green-stained wood, rush-seated, appeal to one as quite charming; no one can desire a more comfortable seat than one formed of the dear old-world rushes, so warm and cosy for children, and so infinitely preferable in many ways to those of cane.

It is necessary to bear certain rules in mind when buying furniture, and not to deviate from them in any way. One important point to remember is that furniture, when standing up closely together, looks very different from what it does when distributed about in a house.

The aspect of the rooms which are to contain it should be kept well in mind, which is not a very easy matter in a big shop or warehouse. Another important point is to be assured as to the sincere workmanship of the various objects. The person of really straitened means scores on this one point, for in buying second-hand furniture, the purchaser has a test of durability, which the buyer of new furniture cannot command.

The backs and interiors of drawers and cupboards should be closely examined if they are bought at a warehouse not well known to the purchaser. The metal-work handles, feet, etc., of cabinets, drawers, and other objects, should be good. A beautiful bit of

furniture is thoroughly vulgarized if the mountings, etc., are inferior, or roughly cast and poorly chased.

If only a few, a very few, articles of furniture can be afforded, it is better to manage somehow for a while with those few, provided they are really good of their kind, for otherwise they will prove to be a lasting source of regret and reproach to the possessor.

There is a point which, oddly enough, few people seem to realize: it is the great difference which lies between town and country surroundings, as regards the furniture of a house.

Objects which will look stately and delightful in a town house, look utterly out of place in a low-pitched country one, where the wide sunny windows are wreathed with clematis and creepers. The green rusticity of the aspect seems almost to offend certain specimens of furniture which looked so much at home in their former town surroundings.

The stature and width of the inmates of a house should be carefully remembered in reference to the buying of furniture, just as it should influence the house-hunter in regard to the size and pitch of the rooms. More especially so when they are furnished in a trivial style, with slight wicker chairs of fanciful shape and such-like inconsistencies. Big people must have solid seats, however plain, and sensible beds and couches, otherwise their awkward movements will utterly spoil the harmony of the daintiest little bijou of a house.

The fairly well-off folk have very much to be thankful for in the arrangement of their dwellings; they can afford to have room enough to get away from each other, and this means more than the mere words convey, when people are noisy in their movements and voices, and live with those who are sensitive and highly strung, or, perchance, nervous brain-workers.

SCREENS AND PANELS

Nothing is cheaper or more effective than a canvas-like surface for the covering of screens, the panelling of walls, friezes, dados, etc.

The cheapest material is the ordinary coarse crash which is sold for dish-

cloths; this varies in price, width, and quality. The lowest, costing about fourpence to fivepence the yard, can be used with excellent results.

In extremities, the ordinary wide unbleached calico can be used, but the crash being of a flax-like texture and showing a coarse thread, of course gives a much better result.

The poorer the material, the greater is the quantity of size needed.

A very important point to remember is the careful straining of the crash over the surface to be covered before sizing. This may be done (if it is desired to have the canvas removable) with small drawing-pins or tacks pierced through small rounds of cork.

Suppose, for example, that our subject is a four-fold screen. Choose a crash of as nearly as possible the same width as the panels. Thoroughly strain this on to the frame-work of the screen; then, having procured size from any oil shop—giving preference to the powdered, concentrated size sold in packets, which is so much cleaner, and in every way better for women's use—buy a flat hog's-hair brush, costing about ninepence; and soak it well in warm water. Size costs about ninepence the pound packet. Take about a quarter of the packet and put it in the bottom of an already warmed earthen vessel. On this pour two quarts of boiling water, stirring well and quickly with a stick until all is thoroughly dissolved. Then as rapidly as possible proceed to brush over, evenly and fully, the canvas surface with this melted size. Canvas is raw and absorbent, so work the size into the fabric as you brush it on.

When one coat is finished, leave the size which is over covered, and sufficiently near to the fire to keep it well dissolved and ready to use for the second coat. It is wise to make it fresh for each application.

When the first coat is thoroughly dry, which will depend on the temperature of the room, but will probably be in a few hours' time—by dry is meant in a fit state for the hand to be passed over the surface without any sticky sensation—the second coat can be rapidly applied. Two coats will be sufficient, and the painted background can be proceeded

with. In the case of a very thin crash, it may be necessary to give three, or even four, coats of size.

When this prepared canvas is used for dados where there is much wear and tear, it is advisable to give the paint, when completed and well dried, a coat of fine carriage varnish, to be obtained from a carriage builder. It will last and look better for this purpose than any other.

Screens can be bought so cheaply now, that it is scarcely economy to make the frame-work at home, as it used to be some years ago. The light four-foot screen, which can now be bought for a few shillings, covered with a gaudy Japanese paper, is well worth buying, not for use in its present state, for the paper gives out on the slightest provocation, but to be recovered or re-hung. The appearance of a tattered paper screen is woeful in the extreme.

Charming bedroom screens can be made if the paper covering is removed. When necessary, one thickness of unbleached calico can be stretched inside the frame to make it solid and draught-proof. Over this can be placed scraps of needlework, silk or velvet, draped or plain, with lace, muslin, or net, introduced in many charming ways. If the screen is only for use, a glazed chintz of nice design forms one of the most durable and useful of coverings. Small cheap screens for nursery use can be made from folding towel-horses, which can be bought very cheaply. The hinges of webbing should be replaced with cheap metal ones, and the covering and ornamenting can then be proceeded with.

For large screens, the prepared canvas, made as directed, makes a very cheap and durable covering. The screen may be painted in contrasting shades, with a line more than half-way down forming a dado, or it can be coloured wholly in one shade, and painted in designs of tall growing flowering plants and grasses, which is a style so well suited to large screens.

Panels add a great charm to the walls of a room. The amateur might begin by panelling a small boudoir or smoking-room. The panels can be formed of almost any material, but for

durability nothing excels this prepared canvas, painted in design and well varnished.

Panels may be formed of the various Japanese and leather papers, of lin-crusta, and similar materials, of velvet, plush, silk, and brocade, and also of serge or flax fabrics, boldly designed in needlework. If the colour is well and harmoniously chosen, these worked panels will form a very original and charming wall covering, inexpensive and unique.

The walls should first be planned out by the home-worker, chalk or charcoal in hand. The size and shapes of the panels must be determined first; the deal moulding must be obtained for fixing round the panels. This, although so important-looking when fixed, is quite light and cheap, and very easy to manage. It adds greatly to the beauty of a panelled room, if the height admits, if there is a frieze rail for china running round it, and a railed shelf above the door.

The wood moulding can be bought plain or painted; it is cheaper to buy it plain, by the foot, and to paint it. Mouldings vary in expense and width, beginning at about twopence the foot.

First cut out in brown paper the size and shapes of the panels, as they will best suit the room; for example, an octagonal one over the chimney breast, long ones in some parts of the room, and short ones in others.

A room could also be arranged panelled in reseda dress-cloth or serge, worked in a bold design, with a touch of pale pink and gold thread introduced—the gold thread adds so greatly to the richness of the effect, especially by artificial light. These panels could be framed with split bamboo, which is most inexpensive (costing about eight-pence per six foot pole, unsplit), and the wall showing between could be painted or distemper-washed a faint salmon pink.

This would fit up a room in a cheap, and yet in a very effective style. The old-fashioned art serge is rather woolly and heavy for this style of decoration, but as aforesaid, some of the faced cloths, can be procured in delicate colourings; they are inexpensive, have a charmingly finished surface,

and would not attract dust, as would a more serge-like material.

STAIRS AND STAIRWAYS.

Many folks seem to be perfectly heedless on the subject of stair-carpets, and the treatment and decoration of stairways.

Where it is possible, the stair-carpet should correspond in colour (if not in quality and texture) with that used on the landings and corridors.

Generally speaking, a plain centre with a patterned edge, or the reverse, looks well. For a wide handsome stairway nothing wears better, nor looks more restful, than an Axminster carpet, self-coloured, with the edge of a deeper tone of colouring, or of a contrasting shade.

A very usual style of stair-carpet, and one which never wearies the eye, but wears nobly, and quarrels not at all, is an Axminster or Wilton carpet, with a black and grey mingled centre; it has a plain bright red bordering, marked off distinctly with black lines.

The same carpet in a wider quality, makes an excellent covering for landings, or when required, for a hall.

This class of carpet is not cheap, varying from three to five shillings the yard, but its wear is simply wonderful.

One great point towards making a stair-carpet live a long and respectable life, is to keep it thoroughly brushed with a stiff long-handled broom, the carpet being first scattered with fresh tea leaves. Paddling about with a small brush is useless, and serves only to rub the dust into the pile of the carpet.

Another point to remember is: that all spots of grease, etc., should be removed at once by the hot iron and brown paper treatment; they must never be left to be trodden into the pile, and then scrubbed at until the face of the carpet is almost rubbed away.

The carpet should occasionally be carefully brushed (the way of the pile) with a small brush and carpet soap, and fairly hot water, and then rubbed dry and clean with a cloth, so that it may not dry stiff.

A very important thing to remember is that for the sake of durability a stair-carpet must never be laid down

on the bare surface of the stairs. Stair-pads are the most convenient things to use for this purpose; they should be fixed, just at the edge of each step, half of the pad secured by two brass carpet tacks, half-way on the step, the other half being allowed to fall over it. When it is inconvenient to obtain proper pads, fairly good ones can be made of any scraps of old calico filled with folded newspapers; a little flock carefully pulled out should be tacked on either side of it, and then covered with the calico, or any old pieces of woollen dress or underwear can be torn up and used in place of the flock.

Covering stair-carpet (in the old-fashioned style) is a mistake; it is far better to have a fairly expensive carpet, and use it uncovered, and treat it well. The constant tread will wear out a covered carpet almost as quickly as an uncovered one, and the result is never satisfactory.

A great deal of the appearance of a stairway depends upon the care of the edges of the stairs. If these are plainly varnished they need rubbing carefully with an oiled rag, not scrubbing nor washing with water in any sense. When the varnish begins to wear off, it is a very simple matter to give the steps a fresh coat.

If the stairs are stained, they should be kept well rubbed with floor wax at the sides, and not allowed to become dim or shabby.

The stairway is one of the chief features in a house; it ought, therefore, to be emphasised and decorated in an original way; but as it varies so greatly in size and disposition, it is a little difficult to lay down rules for its decoration.

When the light is bad, and the stairway for that reason unsuitable for picture-hanging, brass or copper dishes look well on the wall—the genuine old things, of course, by preference. When these are not to be obtained, care should be exercised in choosing those with good and well-finished designs.

The shining of a bright metal dish or plaque is very cheering, and full of suggestions of welcome.

There should be at least one mirror

on the stairway-wall, hanging at a convenient height for the house-mistress to get a glimpse of her coiffure and general effect when passing downstairs perhaps to greet a visitor. Mirrors (besides their utility) always lend a light appearance to a wall, and help greatly in giving deceptive size to a small room.

When the stairway leads down into a good-sized hall, it may be greatly beautified if wire baskets, filled with ivy geraniums, and other suitable evergreen creepers, amongst them the genial welcome ivy, are hung at intervals from the balusters. The plants can be easily watered and tended from the stairway, and they always thrive far better when hanging in mid-air than when standing on window sills or in stands.

When the corridor or landing has a break of any sort, a turn or an arch, it is a great improvement to have it draped from one side, either with a curtain of material, or of beads or bamboos.

The fixing of a pole to carry light curtains is an extremely simple affair.

If the expense of metal brackets and rods is a consideration, a very good substitute can be made with a wooden pole and brackets. A plain turned rod of pine of medium thickness can be obtained from a carpenter for a sum varying from sixpence to eightpence, according to the thickness. Wooden brackets of the same wood, fashioned out of one piece, can be made for a few pence; they will hold the pole very comfortably. The wood of the bracket should measure not less than one inch in thickness.

The rod and bracket can be painted, or enamelled, to harmonize with the wall decorations.

These cheap rods and brackets are extremely useful for draping the outside of room doors which face on to a landing or corridor, or for curtaining archways, or breaks about a stairway.

When there are young people in a house, and the hall is large and draughty, there is always a danger of little ones taking chills, either in going up and down stairs, or by running to and fro in a corridor or landing.

On wet days especially, a softly

carpeted landing makes a delightful little run for the nursery child, who needs exercise and grows weary of the same four walls.

When the rail of the balustrade is poor-looking, shabby, or insufficient in any respect, it is not a difficult matter for the home-worker to greatly improve its appearance herself. She should take, for instance, some silky velveteen of a suitable colour to harmonize with the wall decorations. This should be measured long enough to cover the rail comfortably, and hang down about three inches beyond it on either side. She should cut the velveteen into strips of the required width and, with the help of the machine, sew the selvages neatly together, bearing always in mind that the velveteen must all go the same way—the pile brushing upwards. When sufficient strips have been joined to cover the whole of the rails, some light fringe, either of the tassel or ball type, must be chosen and sewn along each edge of the velveteen. A portion of common wadding must then be cut off, double the width of the rail; this must be folded, and sewn together with very large stitches here and there to prevent slipping. Some ordinary starch must be made of a fair thickness, and while it is hot the rail should be brushed over with it, and the wadding firmly pressed down and bound over with narrow tape. Starch is best because it is harmless and efficacious, and can be sponged off with hot water at any future time without injury to the woodwork.

When the wadding is fixed the velvet covering can be secured. It may be tied underneath the rail with narrow black tape strings, sewn at intervals along the inside of the covering, leaving the two or three inches of fringed bordering hanging loosely below, or it may be securely fixed by being nailed into the grooved part of the rail on either side.

This is the most satisfactory way of fixing, and, if done carefully, would scarcely injure the rail at all, leaving only tiny holes in the woodwork, which a touch of paint and putty would quickly disguise. Small brass-headed fancy tacks can be used, or

short large-headed ordinary nails. If these are used the heads should first be covered neatly with a round of the velveteen. This must be cut a size larger than the head of the nail, and simply over-sewn all round and loosely placed over it and pulled up closely. A still simpler plan would be to touch the heads of the nails with a tiny brushful of oil paint or enamel of the same shade as the velveteen; or, again, they may be painted with a coat of pegamoid paint. This is most artistic in appearance, like dull silver, economical and durable, and invaluable in a house for touching up and repairing the many little shabbinesses which arise from honest wear and tear, besides being a choice medium for the beautifying of new articles of almost any description.

THE LIVING-ROOM

When it happens that a house is small, and funds are low, the family large and cramped for space, it is far more comfortable and economical to relinquish all attempts at having a drawing-room and dining-room proper, and to be content with the one cheerful, much-used, happy-looking living-room, called in the sweet olden days the parlour.

The odour of food-stuffs is a great drawback to the comfort of this plan, but there is generally a slip of a room somewhere which can be made to hold just the necessary table and chairs for the principle meal of the day.

If the living-room has some good useful screens, and is carefully aired, and the carpet kept free from crumbs, it should tell no culinary tales.

The economy of a living-room only for the fairly well-to-do folks is apparent. One good fire will do duty for two doubtful ones; one warm handsome rug or carpet for two mean-looking ones, and there is more comfort generally in many other ways.

The living-room should strike the note of cheerfulness at the first glance; even if the carpet has seen its first youth, and the clothing of the furniture shows signs of the passage of time, there is a charm about well-used things which compensates for much.

There is even a gleam of poetry in

the arms of an easy chair which has become rubbed and shabby from the touch of little hands, or that part of the back which is hard worn from the resting of a weary head when the day's labour is over. Growing plants, a few singing birds, a fluffy Persian cat, or even some goldfish, if carefully kept, add a touch of humanity to the living-room, which has a softening effect on those who dwell in it.

A plainly furnished room, with (if possible) a good aspect, gold-coloured walls, a few good pictures or etchings on the walls, a pretty arrangement of window drapery, and things about the room suggestive of the home-life of its inmates, will all combine in making a cheery home-like living-room, which will have a happy and beneficial influence upon those who enter it.

When the meals are partaken of in the living-room, it is well to do away altogether with the regular dining-table, and to substitute one which is either round or oval. A well-placed screen, breaking that portion of the room, with a big brass pot containing a palm standing on the floor beside it, will do much towards taking off the appearance of a dining-table. The drawing-room, in the house of work-a-day folk, often has a sort of "Sunday best" air about it, which is far from attractive. The living-room (from the fact of its being really lived in) has an interest and a charm all its own.

THE DRAWING-ROOM

In furnishing a drawing-room proper, one should be greatly influenced by the habits, age, and position of the family. An important point to avoid is inconsistency of furniture. Some people seem to be without a sense of proportion; for instance they will utterly dwarf and destroy the character of a room by introducing one or two huge saddle-bag chairs and couches, which stretch themselves out in a most aggressive way, and detract from the charm of their surroundings. Personal and original touches in a drawing room are desirable; a strip of handsome needlework, which would be absolutely useless as a bordering for

anything within the line of sight, either from the loudness of its design or its scheme of colour (if sympathetically treated), will form a beautiful frieze, and if lightly tacked along the top of a wall, just under the cornice, will have a charming effect.

It is not at all necessary that a frieze of this description should be continued all round the room; in fact, it is better that it should only be used for a certain portion of it. Take, for example, a strip of needlework which is only long enough to go across the chimney-breast and into the recesses on either side of the fireplace. If the objects flanking it are arranged with forethought, no sensation of a sudden halt, or coming to an end of the design, is experienced.

Great charm is added to a drawing-room if the draperies and accessories are altered in even a slight degree at the change of seasons. In the winter all warm tints are acceptable; the red berries of holly, and briony, and the brilliancy of all winter berried plants or trees, teach us this lesson.

Nature is the safest and most truly artistic guide we can have in these matters. Nothing could show up more beautifully against the lead-grey of the winter sky, the grey-green and brown stems, and sticks, and trunks, than a burning brilliant red; for this reason, it adds so greatly to the warmth and joyousness of the interior of a house in winter to have some little touches of red introduced here and there. A bright-red embroidered cushion or a strip of red looped in with the drapery over window or chimney-breast, will suffice to give a note of colour.

In summer, on the contrary, the very thought of red makes one feel hot and unhappy. The wild flowers growing in the hedge-rows, or in that loveliest of all Nature's studios, a field of waving meadow-grass, put up for hay, will give us examples of colour for our summer drawing-room. The white and bright gold of the ox-eyed daisy, the gold, and mauve, and pale-pink of the dandelion, the scabious, and the clover; the gold and pinkish mauve of buttercups and thistles, and the gold of the charlock and other yellow-blossoming weeds, against the pink, and mauve, and gold

which go to form the heads of the grey-flowering grasses.

With reference to drawing-room furniture, the first consideration should be comfort and suitability ; the second, elegance.

If the home-maker possesses any really antique objects, those should be given the places of prominence and honour. On no account should made up or imitations of the antique, stand in the company of the genuine. Those who can afford to buy reproductions, and do not possess any specimens of antique furniture, cannot do better than give their minds to the study of some of the reproductions to be seen in all good warehouses in London, where most beautiful and exact copies of Chippendale and Sheraton models at fairly modest prices can be obtained. For the home of the person of ordinary means, nothing can exceed this type of furniture for elegant simplicity and chasteness.

The workmanship (provided that one is prepared to pay a really fair price) is as good as that of the genuine examples. Any one with a slight knowledge of cabinet work will quickly grasp, on examining specimens of good modern reproductions, that a fair amount must be paid as an equivalent for the time and labour expended, besides the choice wood used, in making them. The old specimens were costly enough in their youth, and in those days labour was infinitely cheaper than it is now. The modern inlay work has now almost reached the point of perfection, but the best kind must always be expensive. It is a joy to contemplate a good bit of inlay work, and generally speaking, the forms of all specimens of the Chippendale and Sheraton school are truly delightful.

A fender-stool of some description is a great addition to the comfort of a drawing-room. In winter it gives a cosy finished appearance to the room, and adds to the attractions of the fireside.

A window seat makes a striking feature in a drawing-room ; directions for making these at home are given in the article on upholstery. The space beneath a window is always bare and ugly. When well arranged, the window

seat entirely removes this appearance, and gives the room a furnished cosy look ; it also greatly adds to its seating accommodation — an important point.

The window seat should be wide enough to provide a comfortable resting-place ; a narrow seat is thoroughly false economy. The fringe, or drapery, which falls below the seat, does not serve as an artistic finish only, it also provides a conveniently screened nook into which can be stowed away magazines, papers, music, etc.

When the window is either a bay or a bow, there is generally an ugly sort of square arch above it ; this can be greatly beautified by a little careful draping ; however narrow the space between the ceiling and the top of the arch, this will serve as a break, and have a softening effect on the whole room. Soft yellow and cream semi-transparent materials, are the most graceful to use as draperies for this purpose ; a width of printed velveteen of suitable colours and design, draped together with a length of golden-hued Madras muslin, gives a very good result.

It adds greatly to the richness of the effect if some plates of good design and rich colourings are fixed at regular intervals so that they may show among the folds ; they also give *raison d'être* to the drapery, which is both helpful and artistic.

When it is necessary on account of the sunlight or unsheltered glare to shade the windows with transparent blinds, the home-worker should steadfastly set her face against white ones of any description ; they look clean and fresh at first, but they lose their freshness so quickly, and throw an ugly and cold white light into the room.

Gold is a charming colour for drawing-room window draperies, curtains, and blinds ; it is a tone of which one's eyes never tire. Gold damask long curtains, with gold tasselled fringes, are hard to beat. The raised design of the damask produces charming shades in the gold, and makes a much more restful and harmonious hanging than one which is composed of various shades of the same colour, and has a more quietly rich effect. Long curtains for the

French windows, short ones for the bay, should be all tasselled around alike, and caught up with ropes and hanging tassels of silk and wool. It adds greatly to the effect of a short curtain for a wide bay window (the curtain should hang about four inches below the window-sill) if the curtain is opened up at the distance of about twelve inches from the front edge; the split portion should measure about the same, and the tasselled fringe may be continued up on either side of it. When the curtain is drawn back from the window the cord should be passed through this separated parting, and caught back on to the curtain-hook, allowing the knotted cord and tassels to appear, and the front part of the curtain to hang straightly down. This has a charming effect.

The short curtains should be made wide enough to draw over a large bay window similar to those which one meets with nowadays in most modern houses.

For the blinds (when they are necessary) gold-coloured muslin looks and wears better than any other. The blinds should be made just like short curtains, and frilled at the edges. They must be cut long enough (about four inches longer than the window) to allow of their being caught back easily. One width of muslin will cut a pair of these little curtain blinds; a hem should be formed on the top, and through this a small rod of plain wood or brass should be run; the rod should be held closely to the top of the lower section of the window by small round brass hooks. The curtains should be frilled at one edge; it takes more work, but the effect is better when the curtains are all formed separately. Even where (as in the case of a wide bay window) it would seem obvious that the whole width of muslin frilled at both edges would answer the purpose equally well, the separate curtains have a distinctly better effect. The frilling should be cut in strips going the selvedge way of the material, and be about six inches in width; this should be folded and pressed with a cool iron, the edges should be turned in and "whipped" over with strong cotton of the same shade, and half the length of the frill

should be allowed for fullness, so that the strips should be cut of the proper dimensions, and each frill gathered with one length of cotton. The frills are then sewn on to the selvedge of the muslin, and the other edge is turned down to form a hem of about an inch in depth, and run along with gold-coloured cotton.

In putting up the curtain blinds, the frills should just cross each other, and be secured by a stitch at the top; they can then be drawn back quite tightly, and securely fastened to a hook or small nail about a foot above the window-sill.

The hemmed part (the back of the blind) should be pleated up in the hand, with a heading of about three inches, and tied firmly with the same string or tape with which the curtain blind has already been secured.

This heading when pulled out and arranged completely conceals the tie, and if secured with pins here and there forms a sort of rosette. When two curtains meet, as they do in a large bay window, these back pleatings are fastened closely together and form one.

The sun will sometimes bleach these gold muslin blinds in a wonderful manner, and at the end of a season they will sometimes look shabby and faded. Instead of having them cleaned (when they are not really soiled), the homemaker should tack them together in a long strip, and send them to be redipped. For a very trifling expense they are returned almost better than when new, with just sufficient stiffness in them to make them artistic but not starchy.

A piano often meets with really bad treatment in a household where there are many children,

A cottage piano should never be placed with its back against a wall; it is hideous in appearance, and all wrong for the performer to be seated back to the audience; it is bad also for the health of the piano, and utterly spoils its tone.

It is always possible to stand a piano out into the room, either towards its centre, where if the draping of the back is judiciously carried out, it forms a break in the room, and takes the place almost of a screen, or just inside the

drawing-room door, with its back facing the door when open.

The piano should be placed carefully and rather in a slanting direction ; this position will be found to be a very good one for rooms of a long and narrow type.

With some arrangements of furniture the piano can be placed across the corner of the drawing-room ; the upper portion of the room where the light from the window falls over the keys of the piano is the best.

If it is a large enough room to allow of this arrangement, it will be found to be a very convenient one ; the piano may almost touch the wall at one side, and sufficient space may be left at the other for the performer to move in and out ; the music-stand, music-seat, and all accessories are in this way hidden from the general view.

The draping of a piano is a delightful task, almost anything may be used for the purpose, and very good effects produced.

A grand piano requires very simple treatment. A handsome cover of rich hued silk plush, fringed and with the owner's monogram, perhaps worked in a bold and determined style in the centre, or in one corner, looks well. It should be lined with a rich silk of a contrasting hue, which will look showy when the covering is thrown to one side.

Just one glass tube for flowers may stand upon the grand piano ; it must be substantial and heavy enough to be free from risk of an accident or overthrow. A few long-stemmed daisies or golden-feather, or other stately blossoms, are suitable for this simple decoration. A tall palm or a flowering plant, such as the spirea, look well standing on the floor beneath a grand piano.

The decking of a fireplace in summer adds greatly to the beauty of a drawing-room, and when the hearth is tiled, as is so generally the case now, no danger from the watering of plants, etc., need be apprehended.

When the old-fashioned firegrate is in question, it is much safer and better in every way to have a sort of large ashpan made of galvanized iron, in the shape of a half-opened fan. This can be placed under the grate itself, and

prevents mishaps from dampness, etc. Ivy and the most ordinary of hardy ferns will grow strongly and well in a firegrate. They should have been potted and "brought on" for a few weeks beforehand, so that they are well rooted, and in a fit condition to begin life under less favourable circumstances. It is well to have a few plants potted up and standing in a convenient window, in readiness to change with any plant in the fireplace which may show signs of becoming yellow from want of light.

A few common bricks make the best stand for the pots ; they can be placed two or three together, and by their means the plants can be grouped in an artistic manner, rising higher towards the centre and the back of the grate.

If there is a large round brass dish to spare for the purpose, it should be secured as already described, and attached to the bars of the grate ; here it will hang high and dry and secure, with the ivy trailing about it, and the fern fronds bending beneath, with the light gleaming on its beaten-out design and its well-cared-for surface.

A brass dish will show to better advantage among the greenery in a fireplace than in almost any other position.

Virginian creeper looks very beautiful as an adornment for the fire-place, when the room is a high one and the fire-place handsomely proportioned.

THE DINING-ROOM

The chief feature of a dining-room is the buffet or sideboard ; a simple and suitable one will help to make a room ; an aggressive one will certainly mar it.

The usual style of sideboard has generally two or three large cupboards below. One of these is arranged with a drawer for holding wines and spirits, the other for cake, biscuits, etc. These cupboards give a heavy look to the sideboard, and make it cumbersome and expensive, besides which, being so near the floor, they are difficult to get at, and the drawer arrangement for wines is an awkward jingling thing to pull in and out. Cake, and similar food-stuffs, are far more wholesome if kept in a ventilated larder, besides which such things destroy the wholesome breezy smell which should pervade

a dining-room, just as much as the other rooms in the house. If there are no cupboards of the sort in the side-board and a cellarette standing beneath it is used instead, a pleasanter atmosphere and more convenience will be the result.

A Chippendale cellarette is a charming possession. Good reproductions of the old-world types are now obtainable. A makeshift cellarette, when a proper one cannot be afforded, may be made out of any deep coffer, or plain box fixed on to feet, divisions being formed inside for the reception of bottles and decanters. It should also be provided with large rings, or hanging handles, fixed on either side, both for convenience in lifting and moving, and also because in combination with the feet they lend an air to an ordinary box or coffer, which gives it a right to be called a cellarette.

The dining-table should depend upon the size and shape of the room; in some cases an oval, in some a round table, are the most convenient shapes. A round one, when the room is wide, lends itself to decorations, and generally makes the prettiest dining-table.

When possible, the lights should be above the table.

There should be plenty of rich colour and brightness about a dining-room; the mistake so often made is to have the colouring dingy, rather than subdued, and the whole tone of the room depressing and unsympathetic.

Brass dishes give a welcome gleam of brightness to the dining-room; they harmonize well with old oak and deep bright tones of colour.

Pictures should be hung with consideration; ghastly and uncomfortable subjects should not have a place in the dining-room. When there are no ancestral portraits forthcoming, fruit and flower subjects (if really good) are always safe and comfortable.

Bronze seems to belong by right to the dining-room; an empire clock, candlesticks, and mirror, and some good bronze statuettes, with a gleam of rich warm colour in carpet and walls and curtains, the brightness of shining brass and silver; and the table flower decorations, however simple, very tastefully done, will give dignity and tone to

a dining-room, and dispel the sense of gloom and depression which should never be experienced in any carefully made home.

KITCHEN REQUISITES

Furniture.—3 chairs (Windsor), 1 clock, 1 coal-scuttle, fender, set fire-irons, hearthrug, linoleum (about 9 yards), table with drawer.

Brooms, Brushes, etc.—3 brooms (bass, soft hair, stiff hair); brushes, 1 cook's brush, 1 dusting brush, 1 plate brush, 1 stair-brush (double, soft and hard), 1 scrubbing brush (cocoa), 1 sink brush, 2 stove brushes, 1 stove brush for black-lead, clothes horse, 1 slop-pail, 2 pails for house, 2 washleathers.

Kitchen Cloths, etc.—2 dish cloths, 2 dresser cloths, 4 dusters, 6 glass cloths, 2 hearth cloths, 2 house flannels, 6 kitchen cloths, 2 knife cloths, 2 pudding cloths, 2 roller towels, 2 table cloths, 6 tea cloths.

Kitchen Utensils.—2 baking tins for cakes, 2 baking tins for meat, 2 baking tins for tarts, 1 baking sheet, 1 bread grater, 1 broiler, butter dish (glass) chopping board, coffee mill, coffee pot, colander, cook's knife and fork, cork-screw, 1 dish (fireproof), dish tub, 3 dishes for kitchen use, Dutch oven, egg whisk, egg poacher, egg slice, fish kettle, fish slice, flour dredger, flour tub, 3 forks for kitchen use, frying basket, frying pan, funnel, gravy strainer, gridiron (wire), 3 jugs for kitchen use, 1 jug for milk, 1 kettle (iron), 1 kettle (small tin), knife board, knife sharpener, knife tray, 3 knives for kitchen use, lemon squeezer, meat chopper, meat saw, mincer, 2 moulds for puddings or jellies, mustard pot (glass), nutmeg grater, omelette pan, oyster knife, paste jagger, pastry board, 2 pastry bowls, 6 patty pans, pepper pot, 3 pie dishes, pint and half-pint measures (glasses), plate basket, 6 plates for kitchen use, potato masher, 3 pudding basins, rolling pin, salt cellar, 3 saucepans (iron), 1 saucepan (enamel), set of skewers, two sieves, 10 spoons (dessert, table, tea metal wooden, 2 each) steak tongs, 1 steampan, steamer to fit saucepan, stock pot, sugar basin (glass), sugar dredger, teapot (earthenware), tin opener, toasting fork (wire), 2 tumblers, 2

wash-up pans (zinc), weights and scales.

The whole of the above articles should cost a little less than ten pounds.

THE GUEST CHAMBER

A "Spare-room" is often the most melancholy room in the house, chiefly because it is kept unused and for visitors only. The one and only way to make it cheerful-looking and welcoming is for the homemaker to use it herself occasionally; it will soon assume a different aspect. An unused room with a put-by air is always chilling and repellent.

One of the greatest comforts in a visitor's room, and one which is generally overlooked, is a luggage-stand. This can be made or bought in two forms, one folds up like a butler's tray, the other is rigid. People rarely unpack their luggage entirely, and it is a most tedious process to kneel down and unearth the contents of a trunk; a luggage-stand is really essential to the comfort of a guest chamber.

Small things are often forgotten in the guest-chamber, to the great discomfort of the visitor. An extra pair of curling irons would sometimes be a great convenience, with a lamp and spirit, or other means of heating them, and also a large-sized framed tile, which is invaluable on a dressing-table both as a stand for the heating lamp and a place of safety for the heated irons. A low, comfortable easy chair, softly cushioned, should always be provided.

Another important item is a little writing-table, with blotter, paper, envelopes, ink and pens, all in working order, and if possible a tiny book-shelf, with some few readable and up-to-date books on it; some people lose their sleeping powers for the first few nights in a strange house.

UPHOLSTERY

The home-maker can greatly add to the attractiveness of her home and the economy of its furnishing if she gives her mind to the study of upholstery. It is rough work for a woman's hands, but it repays the labour expended on it in noble fashion, and when one has thoroughly mastered the

subject, it is very fascinating work.

The home-maker, supposing she wishes to stuff a couch, should establish herself in an empty room, on the floor of which a dust-sheet is spread out. In the middle of this she must stand [the couch, then with a pair of old gloves, a hammer, an old screw-driver, and a pair of pincers, she can begin her operations.

She should turn the couch on its back and carefully pull out the tacks which secure the "bottoming"; this will probably be made of a piece of fine wrapping—it can be bought at any general draper's shop, and is the material of which servants' coarse aprons are made. This bottoming removed, the edges of the covering will be revealed, nailed down over the frame of the couch, and probably fixed also to the outside of it by a furniture gimp, well tacked on with gimp pins. All this must be carefully removed, and the short nails and tacks conscientiously taken out, for if they are left in the frame great difficulties will arise.

The buttons will be the next attachment; the string of these must be cut; then the seat-covering must be removed, also that of the head and the back.

The lower edge of the covering of the back and head parts will be found nailed along on to the framework of the seat; the upper edge will meet those of the back portion of both head and back. These edges will probably be found to be sewn one to the other, and concealed by either a gimp or a narrow furling of the material.

The covering must first be taken off; the couch can be put up on its legs again, and the stuffing carefully removed. If the couch be a good one, the first layer will be covered with a fine, thin butter-cloth, under this will be a thickness of good cotton-wool wadding, then a great bristling quantity of horse-hair, either black or grey or mixed; under this—which should be generous in quantity, and of good quality, bold long hair, crisp and curling—are the springs, which should be of bright coppered wire, of good size and shape.

Having removed the hair, it will be found that the springs are strongly

attached to the crossed webbings, which in reality form the bottom of the couch.

If these webbings are in good condition they may be left untouched; if they are faulty in any way they should be replaced by others. The springs must be examined and firmly attached to the webbings.

If they show any signs of leaning over, or being loose, this can be remedied by means of a string-needle and strong twine. If the springs are bent out of shape they must be unfixed and put into proper order, then carefully replaced again. If hopelessly weak, new ones should be procured from the ironmongers.

The hair should be taken out in the open, and thoroughly pulled apart, strand from strand; shaken, beaten, and if possible laid out in the sun and air. If this is impossible, the airing and shaking can take place in a light room with an open window.

When the hair is thoroughly freed from dust, it should be well sprinkled with disinfectant and left to dry, either in the sun or in front of a fire, before being replaced. It must be absolutely dry, as damp hair is moth-breeding and obnoxious from every point of view. It is most probable that fresh wadding for the top layer will be required; in fact, it is almost a necessity. This can be bought by the yard at any general draper's shop. The unbleached wadding answers every purpose, and ranges in price from a penny-halfpenny to fourpence the yard.

If any part of the horse-hair has become matted or unpleasant, as it will if damp or anything unclean has been allowed to fall upon the couch, it should be burnt and replaced with fresh hair.

When the hair is in a fit condition to be re-covered, it should be carefully replaced and tucked in between the springs, then lightly but firmly laid in position above them. The hair must be kept in position by being tacked through and through to the crossed webbings with a long upholsterer's needle and twine. These stitches should be very large, and extend cross-wise. Over this again should be spread

the layer of cotton-wadding, and then the couch is ready for its covering.

Happily for the home-maker, the fashion for "buttoned" upholstery is steadily dying out; it is very seldom seen nowadays on the seats of any furniture, and this is an immense saving of labour. When the buttons are used they take the place of the string-stitching to which I have alluded above, in keeping the hair in place, and from rucking up in lumps.

Buttons will generally be a necessity for the backs and heads of couches, and the backs and arms of easy chairs, as without them it is difficult to define the curves of these portions, but as only two or three rows are used, and only where necessary, the labour (in comparison with the old form of buttoned all over upholstery) is nominal.

Moulds should be procured, made of wood, small, not very thick, and slightly rounded. These must be covered with portions of the same fabric as the couch.

Rounds should be cut rather larger than the moulds, these should be sewn over and over with needle and thread, and drawn up round the button moulds, then the edges must be sewn up over to form a sort of shank.

The fabric covering those parts which are to be buttoned (the arms and back for instance) should be cut about two inches larger everywhere to allow for the buttoning.

The skilled worker carefully folds the material for the front of her chair or couch in a half-inch fold, pressing it firmly to keep it in position; she then pinches up another fold lying in the opposite direction, this fold also being made the reverse way of the first fold. Holding the centre of these folds, which form an X, she presses it firmly into that portion of the chair or couch which she has decided shall be buttoned. She makes a large knot at the end of the string, pushes the needle through the arm or back of seat, and firmly through the centre of the X fold. She then pulls the needle out, on to it she threads the shank of a covered button, pushes the needle through the shank, then returns it about a quarter of an inch from the point at which it came

through the fold. She presses (or gets a friend to press) the button very tightly into position, and meanwhile draws the string tightly, and ties it firmly at the back.

With an inch tape the home-maker must measure where the other buttons should come, making them follow in alternate rows so that the folds form diamonds. She must mark the place for the buttons with tailor's chalk, and then continue folding on the cross, as already described, until the desired rows of buttoning are completed. Of course, in straining the fabric over the curved edge of back or arm, the pleats must be kept in mind, and the necessary folds to accommodate the fulness which they have occasioned must be made with due regard to their position.

The covering should be planned ready beforehand. When it is possible it is well to cut the couch seat on the width of the fabric, so that it can be made up without seams. Joins in the back or the "front-back" are not observed as they are when in a seat. Where it is necessary to seam the seat, great care must be taken that the pattern exactly matches, and that the seaming, if done by machine, is evenly stitched, and carefully opened out afterwards.

Where buttons are used, the material may be boldly joined without a pang,

and a home-maker has sometimes saved the whole reputation of a buttoned chair-seat or back, which has perhaps unfortunately contracted an ugly stain, by first cleansing the stain and then covering the discoloured part neatly with a diamond-shaped piece of the same fabric, fitted from button to button, the points secured underneath the buttons, and the tacked-in edges losing themselves amongst the folds.

GIVING UP A HOUSE

The condition of a vacated house always reflects very strongly on its former occupants. It is quite easy to arrange that each room shall be thoroughly cleansed as it is emptied, and all cupboards and odd nooks made sweet and clean. The dust-hole even should be well cleaned and swept out. Old papers and torn-up letters should be burnt. Old medicine bottles and others, either returned or given away, and every sort of rubbish and little personal relics of no value, should be carefully destroyed.

Although this is a matter which only requires forethought and common-sense, it is one which is very frequently neglected. A house should look brighter and better when it has been lived in by nice people; they must leave an impression of some sort—it should be one of cleanliness and order.

FRENCH WORDS AND PHRASES.

A la mode, according to the fashion.

Au fait, well informed.

Au revoir, farewell.

A votre santé, to your health.

Beau idéal, perfection.

Belles lettres, elegant literature.

Bon ami, a good friend.

Bonhomie, goodness of heart joined to simplicity of character.

Bon vivant, one fond of good living.

Canard, lit., a duck; an idle fabrication.

Carte blanche, lit., a blank sheet of paper; permission to any one to act as he pleases.

Cul de sac, lit., the bottom of a bag; a street or lane having no outlet at one end.

Dénouement, the issue; final event.

Eclat, brilliancy.

Elite, the best; most select.

En route, on the way.

Entente cordiale, a friendly feeling.

Entre nous, between ourselves.

Faux pas, a false step; an error.

Hors de combat, disabled.

Jeu d'esprit, a play of wit; a jest.

Mal de mer, sea sickness.

Mot à mot, word for word.

Nom de plume, pen-name.

On dit, it is said; a current rumour.

Raconteur, a narrator; teller of stories.

Raison d'être, the reason of being.

Réchauffé, lit., something reproduced.

Recherché, elegant, attractive, refined.

Sang froid, cold blood; apathy.

Sobriquet, a nickname.

Tête-à-tête, head to head; face to face.

Tout ensemble, the whole.

Vis-à-vis, face to face; opposite.

GAMES AND AMUSEMENTS

ROUND GAMES

Round games, and more especially games involving forfeits, will always form a most attractive feature of parties, and may also be made to furnish a great deal of amusement at gatherings where none but grown-up people are present. Those contained in the following pages have been chosen with care, and will be found to include the best of the round games. It is to be observed that the directions given may here and there by general agreement be departed from, sometimes, indeed, what will for the occasion be a great improvement may be contrived by some ingenious spirit.

Acting Rhymes.—The players divide into two parties, one party remaining in the room whilst the other goes out. Those who remain in select a verb, such as dance, sing, eat, weep, laugh—any verb will do. They then request the attendance of the other party, and tell them they have thought of a word that rhymes with — naming a rhyme for the word selected. The others must then act in dumb show the word they think has been chosen. Thus (having chosen the word *rowing*), "We have thought of a word that rhymes with sewing." The party who have entered the room imitate a man mowing. They are hissed out; it is not "mowing." They re-enter and imitate hoeing. They are hissed out again. They come in again and imitate a man rowing, which being right obliges the other party to take their place and go out into the cold.

Birds Fly.—In this game all the players place a finger on the table or on the knees of the leader of the game, and they must raise them in the air

whenever the leader says, "*Birds fly* or *Pigeons* (or any other winged creatures) *fly*." Should she, however, name an animal without wings, and any player raise her hand without thinking, she must pay a forfeit. And she must do the same should she neglect to raise it at the mention of any bird or winged insect.

Blind Man's Buff.—One is chosen to play the part of blind man, and with his eyes bandaged tries to catch the others, who, of course, do their best to escape. Whoever is caught by the blind man becomes blind in turn.

Blind Postman.—The postman is chosen by lot, while the postmaster-general either volunteers his services, or is elected by the company. The person to whom the unwished-for honour of enacting postman falls (either a lady or a gentleman) is blindfolded, the rest of the company meanwhile seating themselves round the room. The number of chairs is limited so that there shall be one less than the number of players. The postmaster-general then writes the names of certain cities and towns on slips of paper, giving one to each person, so that they may remember by what name they are to answer. In cases where there are few players, the names can be given orally, but the players have to keep secret the name of the town allotted to them. The blind postman is stationed in the centre of the room, and the postmaster-general takes up a position from which he can address the entire company. He begins the game by calling out, "London to Edinburgh," or, "Dublin to Glasgow" (or any other places he may choose). The players representing the places named ~~must~~ instantly; and endeavour

to change seats with each other; while the postman tries to capture one of them before they accomplish the change. Should he succeed, he removes the bandage from his eyes and takes the chair which his captive has vacated, while the latter is blindfolded and becomes postman in turn, in addition to paying a forfeit. Forfeits are also incurred by those who do not spring to their feet and endeavour to change seats with the town or city whose name is called in connection with their own. Forfeits are also demanded of those who, in their hurry to be in time, answer when their names have not been called. Should the postmaster-general call out "General Post" all the players must rise and change places. The confusion caused by these *contretemps* places many chances in the postman's favour.

Blowing the Feather.—The players sit in a circle and as closely as convenience will allow. One takes a piece of cotton-wool or a feather, or any other light substance, tosses it up in the centre of the circle, and blows on it to keep it floating in the air. whoever it comes down nearest must blow on it again to prevent its lighting on any part of her person—an accident which would render her liable to a forfeit.

Bouts Rhymes.—The company being seated as in other round games, the director reads from a book, or, if he prefers it, recites a line of poetry, to which the person to whom it is addressed is bound to add a line corresponding with it in rhyme, measure, and sense, under pain of having to pay a forfeit. When the director has given the line, he spins a top, and the poetic feat must be accomplished before it ceases spinning. Poetry of a high order, of course, is not to be expected, indeed the more nonsense the more fun. Example.—DIRECTOR (*giving a line*): "The year is dying in the night." ANSWER: "And certainly it serves him right." DIRECTOR: "The busy lark, the messenger of day." ANSWER: "Quite lost his voice, and had nothing to say."

Coek Fighting.—This is played by two persons only. Each is seated upon the floor with hands tied together with a handkerchief at the wrists, and

legs tied together just above the ankles. The hands are then placed over the knees, and a stick passed over the arms and under the knees, thus locking the arms in position. The players are now set opposite one another, with toes touching, and the game is to trip one's opponent over by the use of the toes only. Frequently both roll over together, when the game recommences.

Confidences.—A tale, as we all know, gains by repetition, and this game is often an amusing illustration of the fact. A lady whispers to her next door neighbour (i.e., the person sitting by her) an imaginary account of what one of the gentlemen present has said or done. The listener repeats it, in a whisper also, to the lady or gentleman seated by her; and thus it is whispered from one to the other all round the room till it reaches the last person, who repeats it aloud. It will be found, no doubt, that, either through mistake or *playful* malice, it has gained considerably in its passage round the circle.

Consequences.—Each player in this game is provided with a pencil and a long slip of paper, on which to write according to the directions given by the leader. All first write down one or more terms descriptive of a gentleman, fold down their papers so as to conceal what is written, and hand them to their next neighbours. A second order is then given, and all write in response to it, fold the papers down as before, and pass them on to the next neighbour, and so on, until the directions are exhausted. The leader then reads the contents of the papers aloud, which, from their inconsistencies and absurdities, will cause much amusement. Let us suppose the following to be the directions of the leader:—"Begin by writing a term descriptive of a gentleman." "Write a gentleman's name; some one you know, or any distinguished person." "Write an adjective descriptive of a lady." "Give a lady's name." "Write down some date or period of time when a thing might happen." "Tell what the gentleman said." "Make the lady reply." "Tell what the consequences were." "State

what the world said of it." The paper being opened, we will suppose it to read as follows: "The modest and benevolent Henry VIII. met the beautiful and fascinating Madame de Staël, on the rural Golden Gallery of St. Paul's, on a moonlight night. He said, 'Dearest, I adore you,' and she replied, 'I'm very fond of it.' The consequences were, that they were married, and the world said, 'All's well that ends well.'"

Crambo.—One player leaves the room, while the rest take their places in a circle. They select a word and call the guesser in. He is then told a word that rhymes with the one chosen, and he then goes on to guess, by describing, without naming, other words to rhyme, till he arrives at the right one. For example, the word chosen is *play*. The guesser goes round the circle, and asks each in turn a question, the answer including a word that rhymes with the selected word. He is told that the word chosen rhymes with say, "Is it the poet's month?" "No; it is not May." "Is it a road to anywhere?" "No; it is not way." And so on, till he ends in guessing rightly, when the last one to answer the guesser leaves the room, while another word is selected to tax his ingenuity.

Five Vowels.—The company question each other alternately and the answers should be brief, suitable, and prompt; but must not, under pain of a forfeit, include the vowel the person demanding the answer says must not be included. Example.—**MARY:** "Charles, do you like mince-pies? Answer without an A." **CHARLES:** "Yes; I like them very much. Are you fond of dancing, Arabella? Answer without an E." **ARABELLA:** "I am most partial to it," etc.

Hot Boiled Beans, and melted butter.—A small object is selected to be hidden, and then all the children but one are sent out of the room. The child in the room hides the object in an easily accessible place, and calls out "Hot boiled beans and melted butter, ladies and gentlemen come to supper." The others now enter and commence to hunt for the article that has been hidden. When one gets near it he is told that he is "getting warm." If

very near, he is "hot," or "burning," as the case may be.

Whoever finds the article hides it next time, and sometimes the others pay forfeit.

Hot Cookies.—In this game a player kneels before a lady, hiding her face in her lap. She then places one hand on her back with the palm uppermost. The rest of the company then advance, and each in turn gives a slap to the open hand. The player who is kneeling has to guess who gave the slap. Should she guess rightly the player who has been correctly named has to take her place; if not, she must just go on guessing till she names one correctly.

"How, When, and Where, do you like it?"—This may be played by any number of persons. The players being seated, one of their number known as the "Stock" is sent out of the room, and the rest then agree on some word with more than one meaning. The "Stock" is then called in, and he or she asks each of the company in succession, "How do you like it? One replies, "I like it cold;" another, "I like it hot;" another, "I like it new;" another, "I like it old." He then asks each of the company, "When do you like it?" One says, "every day;" another, "very seldom;" a third, "in the forenoon;" a fourth, "at dinner;" a fifth, "at all times," etc. Lastly the "Stock" goes round and inquires, "Where would you put it?" One says, "I would throw it into the sea;" another, "I would bury it in the earth;" a third, "I would hang it on a gooseberry bush;" a fourth, "I would put it in a pudding." From these answers the "Stock" may or may not guess the word chosen; but should he be unable to do so, he must pay a forfeit. Many words might be selected for the game, such as—Aunt and ant; plane and plain; rain and rein; key and quay; beau and bow.

Hunt the Ring.—For this game a piece of string long enough to reach round the circle in which the players seat themselves is required. A ring is slipped on to the string and the ends tied together. One of the party stands in the middle of the circle and

endeavours to catch one of the players with the ring. The players hold the string with two hands and continually turn it round and round the circle, except when at the request of the person in the middle one of the number has to leave go and expose his hands.

Hunt the Slipper.—The players select one of their number to become "customer," and the others seat themselves in a circle on the floor round him, and with their hands behind their backs. They are supposed to be cobblers. The customer hands his shoe to one of the cobblers, who passes it to his next hand neighbour, and the slipper is then continually passed from one to another. The customer in the middle has to guess who has the slipper, and when he has fixed upon the right person that person becomes customer instead of the other. During the progress of the game the cobblers chant the following :—

Cobbler, cobbler, mend my shoe ;
Get it done by half-past two.

Hunt the Whistle.—Fasten a whistle to the skirts of some unsuspecting individual. Place him in the centre of the players, who must be all standing up, and show him another whistle, telling him it is to be passed round the company and sounded while his back is turned—his business being to detect the player with the whistle. The person on whom he has turned his back lays hold of the whistle attached to him and blows it. The victim turns round at the blast. The other, however, has quickly let go the whistle, and while he is watching to detect its presence in this quarter, he again hears it sounded at his back. He turns round again, but whenever he looks for the whistle it is sounded behind him.

I Wrote a Letter to my Love, or, Drop the Handkerchief.—All except one of the party form a ring, and hold hands. The player left outside the ring, walks round touching each of the players in turn with a handkerchief, and chanting the following lines :—

I wrote a letter to my love,
But on the way I dropped it ;
One of you has picked it up
And put it in your pocket.

Having selected one of the party, she

drops the handkerchief behind him, and starts to run round the ring. The player behind whom the handkerchief has been dropped leaves his place and endeavours to catch the postman before she can occupy the place in the circle that he has left. Sometimes instead of running straight round the ring the two dart under the uplifted arms of the other players, and sometimes the circle obstruct either the hunter or the hunted. If the postman is not caught before she occupies the vacant place in the circle the other becomes postman and the game recommences. If she is caught she gives a forfeit.

Magie Music.—All the players must leave the room except one, who must arrange what the others are to do. Then he or she calls the others in, and they must guess what they are to set about. If they do the wrong thing, the piano must be played softly, but it must increase in loudness as they approach doing what is right, and when at last they do it, the piano is played very loud. Sometimes only one player is set upon the task, the rest of the company finding amusement in watching him.

Musical Chairs.—The *Lord of Misrule* makes the preparations for this noisy game by setting a row of chairs down the middle of the room, *one less* in number than the persons who play. The players then take hands and dance round the chairs. The person playing the piano suddenly stops when he or she pleases—always when least expected. The instant the music ceases the players rush to the chairs and try to get a seat. One will, of course, be left out. He or she pays a forfeit, and a chair is taken away. The music and dancing begin again. Once more the music stops suddenly in the middle of a bar, and the players scramble for seats, with the same consequence as before—one is left. The game is renewed till only *two* dancers go round *one* chair. The one who succeeds in sitting down when the music finally ceases is the winner of the game, and imposes the forfeits on all the rest.

My Lady's Toilet.—All the players sit in a circle except one, who is the lady's maid ; she takes up her position

in the centre. The players each take a name of some article belonging to a lady's toilet, such as a chain, watch, ring, brush, comb, earrings, or anything suitable they can think of. The lady's maid then says, "My lady is going out and wants her chain," or any other article she likes to name. The one who is named gets up and turns round, saying, "Here, my lady," as she rises. When the *mirror* is named, all rise and make gestures and grimaces as if standing before a mirror. When the leader says, "My lady is dressed," all change seats, and the one left out becomes leader in turn. Any failure in answering to a name, or making the gestures at the mention of the *mirror*, costs a forfeit. Any failure to change seats also result in a forfeit. Should the leader name any article not selected, she must pay a forfeit.

Oranges and Lemons.—Two of the players arrange between themselves which will be called "Oranges" and which "Lemons." Then they face one another, and holding and swinging their hands they chant the following ditty:—

Oranges and Lemons,
The Bells of St. Clement's,
I owe you five farthings
Said the Bells of St. Martin's.
When will you pay me?
Said the Bells of Old Bailey.
When I grow rich,
Said the Bells of Shoreditch.
When will that be?
Said the Bells of Stepney.
I do not know,
Said the big Bells of Bow.
Here comes the candle to light you to bed,
Here comes the chopper to chop off your head,
Chop, chop, chop,
Last, Last, Last, Last, etc.—man's head.

The other players in a long line, holding the tails of one another's coats or dresses, meanwhile pass underneath the arch, and go round the two players and under the arch again and again, until the last line, "Last, Last, Last man's head," is reached, and then the "Choppers" hold the one who is passing under the arch at that moment. This player is withdrawn and asked whether he will be Oranges or Lemons. Having made his selection

(secretly to the "Choppers") he is told to go behind the player who represents whatever he has chosen. The game then continues until all the players are "executed" and have selected which they will be. They then put their arms around one another's waists, and a tug of war takes place between the Oranges and Lemons. Of course there may, for example, be 12 Oranges and only 3 Lemons.

Partner's Chair.—The chairs are placed in a long row, and all the gentlemen of the party sent out of the room. The ladies remain, and after arranging amongst themselves which gentleman they are to have for a partner, take up their positions, one behind each chair. A gentleman is now invited into the room and he sits himself down on the chair of the lady whom he thinks has selected him. If he is correct he is loudly clapped, and remains in the room to watch the fun, but if he is wrong he is hissed out of the room and another gentleman enters to find his "partner."

Postman's Knock.—One of the players is selected to be postman, and another doorkeeper. The postman goes outside the room and the doorkeeper stands at the door. The other players then seat themselves in a row. The postman then knocks at the door and says he has a letter for Number 5, for example; the person occupying the fifth chair from the door has to leave the room and be kissed. He or she then becomes postman, those remaining in the room rearranging themselves so that the person outside cannot choose any particular person. The same proceeding is then gone through again. Sometimes the ladies take only odd numbers and the gentlemen even.

Proverbs.—One of the company is sent out of the room; the rest decide on a proverb, a poetical quotation, or any known sentence, to be discovered by him on his return. To effect this he is entitled to ask questions from the company all round, beginning with whoever sits on his left. The question may be what he pleases, but the answer from the first person must contain the first word of the proverb, the answer from the second must contain the

second word, and so on, each member of the party taking a word in succession, and the questions going round the company as many times as are necessary till the proverb is completed. The great difficulty in the game is to contrive answers in such a way that the fatal word may not be conspicuous. It is best to choose proverbs or quotations composed of the most common words, such as "Still waters run deep," "There's many a slip 'twixt the cup and the lip," and so forth. The guesser may be allowed some time for deliberation, but should he be compelled to "give it up," he must leave the room and another proverb is tried.

Questions and Answers.—Each player is furnished with a pencil and any given number of slips of paper. On one slip any question is written, as "How old is the moon?" "Where shall I dine?" "What is truth?" and so on. On another slip any random single word is written, as "Sense," "Table," "Imagination," etc. All the questions are then laid in one heap, and all the answers in another, and every player selects one slip from each. A few rhymes must then be strung together embodying the single "word" in the answer to the question. Thus, supposing you draw, "How old is the moon?" and the word, "Simpleton," you may say:

Simpleton I sure would be,
If the moon's age would puzzle me!
I curtsied to her young last night—
One day and two nights must be right.
The question and answer are doubled up together and cast before the "honorary secretary" chosen for the occasion, and are read for the amusement of all, frequently amidst roars of laughter. Those who have not finished the necessary reply have to pay a forfeit, or a fine as may be settled before the game begins.

Reviewers.—Every player must be provided with a pencil. The first player must write down on a long slip of paper an imaginary title of a book. He turns the top of the paper down to cover what he has written and passes it on to the next, who writes a sub-title without seeing the first, and folds the paper down. The third must give the name of an author, and the fourth a

motto for the title-page. The next player writes a review, attaching to the review the name of any paper she pleases, and then turns the paper down as before; she then passes it on to the next player, who writes another review. A second paper is then started, only another player writes the first title, and so on till the last paper is finished. The papers are then read out, and one may read something like this: "Killed by Love; or, Up in a Balloon, by Tommy's Uncle." "Still waters run deep."—"This is a very silly book.—*The Times*." "Most fascinating romance we have ever read. Try it on the dog."—*Punch*.

Sea and Fishes.—The players seat themselves in a circle, leaving out one of their number, who represents the "Sea." Each player having taken the name of some fish, the "Sea" walks slowly round outside the ring, calling her companions one after another by the titles they have adopted. Each one, on hearing his or her name pronounced, rises and follows the "Sea." When all have thus left their seats, the "Sea" begins to run about, exclaiming, "The Sea is troubled! the Sea is troubled!" and suddenly seats herself, an example immediately followed by her companions. The one who fails to secure a chair becomes the "Sea," and continues the game as before.

Shadow Buff.—This affords good practice at guessing. A screen or frame is covered with white linen, and behind it is placed a lighted candle. One of the company is seated before the screen, and the others passing by between the candle and the white surface. By the shadow, or silhouette, the guesser must name the person behind the screen. Only the face is thus shadowed, the figure being hidden by skirts, cloaks, and shawls. Without the least disguise the right name is not given once in a dozen times.

The Elements.—The players seat themselves in a half-circle round the queen of the game, who holds in her hand a ball of thread, partially unrolled and fastened by a knot; leaving a length of thread long enough to reach any of the players she may choose to throw it at, and enable her to draw it

back immediately. The names of three animals are then chosen, one inhabiting earth, another air, and the third water—for example, *cat*, *eagle*, and *herring*. Whenever the queen touches a player with her ball of thread saying, "Earth, air, or water," the player must immediately answer with the name of the animal inhabiting the element mentioned. For example, should she say, "Air," the player she touches will at once answer, *eagle*. Should she reply *herring*, or *cat*, she must pay a forfeit. The queen may also say, "Fire," and when she does so a dead silence must be observed. Should she say, "The Elements," all the players together must repeat the names of the three animals chosen in quick succession.

The Huntsman.—This may be played by any number of persons above four. One takes the part of "Huntsman;" the others call themselves after the different parts of the dress and accoutrements of the sportsman: thus one is the hat, another the coat, whilst the gun, dog, shot-belt, powder, powder-flask, and all other articles belonging to a huntsman have their representatives. As many chairs as there are players, excluding the huntsman, are then ranged in two rows, placing the chairs back to back. All the players then seat themselves; and being thus prepared, the huntsman walks round and calls out the assumed name of one of them; for instance, "powder-flask!" when that player immediately rises, and lays hold of the coat-skirts of the huntsman, who continues his walk and calls out the others one by one. Each lays hold of the skirts of the player before him, and when they are all summoned, the huntsman sets off running round the chairs as fast as he can, the other players holding on and running after him. When he has run round two or three times he shouts out "Bang!" and immediately sits down on one of the chairs, leaving his followers to seize the other seats as they best can. Of course one is left standing, there being one chair less than the number of players, and the player so left must pay forfeit.

The Old Sailor.—One of the children pretends to be an old sailor, and goes

to each of the other players in turn saying, "Here comes a poor old sailor from Botany Bay, What have you got to give me to-day? You mustn't say Yes, No or Nay. Black, White or Grey. He then proceeds to beg from the players, and the player he is addressing has to answer his questions without using any of the prohibited words. Any one who laughs, does not reply at once, or uses any of the forbidden words must pay a forfeit, or take the place of the old sailor.

Pork and Greens.—This is a variation of "The Old Sailor," except that in reply to every question addressed to him the player who is being questioned must reply "Pork and Greens" and nothing more. The old sailor says "Here comes a poor old sailor from Botany Bay, What have you got to give me to-day," and follows with questions to which the answer "Pork and Greens" would sound foolish, e.g. Q. "What is your bed made of?" A.: "Pork and Greens." This is a game for younger children.

The Rule of Contrary.—The players take hold of the edges of a handkerchief. The leader of the game takes hold with the rest, and then traces mystic circles on the handkerchief with her forefingers, saying, "Here we go round by the rule of contrary (always pronounce it in this game *contrairry*), when I say, 'Hold fast, let go; when I say, 'Let go,' hold fast." She then says, "Let go," or "Hold fast," just as she pleases. When she says, "Let go," all who do not hold fast pay forfeits, and those do the same who don't let go when she says, "Hold fast."

Thought Reading.—This is a trick to discover a given word by the aid of a confederate who plays the part of *witch*. Having entered the room and taken a seat, you are addressed by the witch, who makes mystic passes over you with a wand. She speaks in short sentences, each commencing with a consonant in the word, in rotation. These sentences she divides by waving her wand over your head. The vowels are expressed by thumps on the floor with her wand, thus: one thump stands for A, two for E, three for I, four for O, five for U. Suppose the word chosen to be Boatman. The

witch begins, "B-e prepared, my trusty spirit, to answer my questions (*thump, thump, thump, thump!*—a wave of the wand—*thump!*—a wave of the wand—. To answer my question, O spirit, so mind—a wave of the wand—. M-ind what you are about—*thump*—a wave of the wand—. N-ow, expound the oracle." The audience may be still further puzzled by fixing on the second or third letter instead of the first.

Thought Reading [another method].

—The company take their seats in a circle. The first lady thinks of a gentleman present, and then asks, "What's the object of my thought like?" The others may make any answer they please, and liken him to "a sixpence," "a gorilla," "the moon," "a star," "a post"—anything. When every one has named some object of resemblance, the lady tells who was the object of her thought, and demands in what manner he resembles the thing or person named. If no good point of resemblance can be found, the defaulter in wit must pay a forfeit.

Winking.—The girls seat themselves on chairs arranged in a circle. One chair is left vacant. A boy stands behind each of the chairs, and the boy behind the vacant chair has to wink at one of the girls when she must at once try to get to his chair. It is, however, the duty of the boy behind the chair to stop the girl in front of him, and if she is touched before she can get away from the chair, she must resume her seat, and the winker has to continue in his position until he can get a girl to occupy his chair. Then the winking is carried on by the boy left with a vacant chair.

"Wolf."—Only one gentleman at a time can take part in this game, but any number of ladies can engage in it. The gentleman plays the part of *Wolf*, the principal lady acts as *Shepherdess*, and all the rest stand behind her and form the *Flock*. The *Wolf* tries to seize the lamb who happens to be at the extremity of the flock. He comes forward saying, "I am the *Wolf*! the *Wolf*! come to eat you all up." The *Shepherdess* answers, "I am the *Shepherdess*, and will protect my lambs." To this the *Wolf* replies, "I'll have

the little white one with the golden hoofs!" The *Wolf* now tries to break the line of the flock, but the *Shepherdess* extends her arms and tries to prevent him. If he manages to break through, the lamb at the end runs before he can catch her and places herself in front of the *Shepherdess*, where she is safe. The rest in succession follow her example, till in the end the *Shepherdess* finds herself the last of the line. The game ends with the *Wolf* having to pay a forfeit for every lamb he has allowed to escape. Should he succeed, however, in capturing one of them he has the privilege of saluting her, and she has to pay a forfeit.

FORFEITS

The "crying of forfeits" is managed in this way. The director, or any one of the party who has come under no forfeit, collects the forfeits—trinkets of all sorts, handed in as a pledge that the owner will do as ordered—together, and, sitting down, calls one of the players to kneel with his or her face on the director's knees, so that the forfeit cannot be seen, as the director, holding one of the forfeited articles a little way over the head of the person kneeling, cries out, "Here's a pretty thing, and a very pretty thing; and what's to be done to the owner of this very pretty thing?" The person having to pronounce the penalty then asks, "Is it for a lady or a gentleman?" and, on being told, proclaims the forfeit, choosing the most difficult thing to be thought of. The person to whom the forfeit belongs has at once to perform the penance mentioned, and in this way all the forfeits are cried one after the other. The director can call on a different person to kneel as often as he pleases, or each one can cry a certain number of forfeits apiece.

The following are some of the best forfeits invented:—

1. To bow to the wittiest, kneel to the prettiest, and kiss the one you love best.

2. To bite an *inch* off a hot poker. This is done by making a bite with your mouth one inch distance away from the hot poker.

3. Give your private opinion of each member of the company. This is

not unlike the penance of Good Advice (No. 32)—only instead of sage counsels you impart (aloud or in whispers, as you may be instructed) to all the players your private opinion of them.

4. Place a straw on the floor so that you cannot jump over it. Place it against the wall.

5. Kiss yourself in the looking-glass.

6. Push your friend's head through a ring. This is accomplished by putting your finger through a ring and pushing your friend's head with the tip of it.

7. Kiss your shadow. This may either be done literally by kissing your own shadow on the wall, or, more agreeably, by putting yourself between the light and a nice young lady and saluting her.

8. To laugh in one corner, cry in another, sing in a third, and dance in a fourth.

9. To put one hand where the other cannot touch it. This is done by putting the right hand to the left elbow.

10. To say "Quizzical quiz, kiss me quick," six times running without drawing breath.

11. Smile without tittering or laughing in each corner of the room.

12. To kiss a book inside and outside without opening it. This is done by kissing the book inside the room and outside the room.

13. To put two chairs together back to back and take off your shoes and jump over them. This forfeit is only a catch. You are to take off your shoes and jump over *them*, not over the two chairs.

14. To put a candle in such a place that all in the room but yourself can see it. This is done by placing it on your head.

15. Repeat the letters of the alphabet, leaving out *o*, three times, without stopping.

16. Stand on a chair and perform whatever grimaces or motions you are bidden without laughing.

17. Put yourself through the keyhole. This is done by writing the word "yourself" on a slip of paper, rolling it up, and pushing it through the keyhole.

18. Repeat six times without a

mistake: "A lump of rough light red leather, a red light rough leather lump."

19. Ask a question that cannot be answered in the negative. The question is, "What does *Yes* spell?"

20. Look up the chimney and say—

Peep, fool peep,

Peep at your brother;

Why mayn't one fool

Peep at another?

21. Say aloud—

I am a goose, as I do confess.

So return my forfeit: you can't do less.

22. Perform "the egotist." This consists in proposing your own health in a complimentary speech, and afterwards singing the musical health honours—"For he's a jolly good fellow."

23. To dot and carry one. Hold one ankle in one hand, and hop round the room.

24. To say five times without a mistake, "Around the ragged rocks the ragged rascals ran."

25. Repeat five times rapidly, "Villy Vite and his wife vent to Vinsor and Vest Vickham von Vitsun Vednesday."

26. To answer a riddle or give a conundrum.

27. Go out of the room with two legs and return with six. Bring a chair with you.

28. Become the spirit of contradiction. Whatever tasks may be imposed by each member of the company, the person condemned to act under the influence of the spirit of contradiction has, of course, to do just the opposite of what he or she is desired.

29. Manufacture a perfect woman. The player ordered to manufacture a perfect woman, selects from each lady present some particular charm of mind or person possessed by her. All these admirable qualities being combined in one imaginary individual, the necessary pitch of female excellence is supposed to be attained.

30. Enact the Grecian statue. Stand on a chair, while any of the company may *pose* you as they think proper, and great ingenuity may be displayed in inventing ridiculous postures.

31. Make your will. This is done by bequeathing to each member of the company something the penitent

possesses—either an article of property or some moral or physical quality.

32. Give either in whispers or aloud any piece of advice that comes into your head to one or all of the company.

33. Blow out the candle. This seems a simple instruction, but the penitent will change his mind as he finds the candle passed rapidly to and fro before his mouth.

CONUNDRUMS AND RIDDLES

The following collection of conundrums will, we hope, give as much amusement:—

Why is a dog biting his tail like a good manager? Because he makes both ends meet.

If a spider were late for dinner, what would he do? Take a fly.

Why are fowls the most economical things a farmer can keep? Because for every grain they give a peck.

Why is a watch-dog bigger by night than by day? Because he is let out at night and taken in in the morning.

What piece of coin is double its value by deducting its half? Half-penny.

When is a clock on the stairs dangerous? When it runs down.

If a bear were to go into a linen draper's shop, what would he want? Muzzlin'.

If a tree were to break a window, what would the window say? Tree-mend-us!

State the difference between a grocer selling a pound of sugar, and an apothecary's boy with a pestle and mortar? One weighs a pound and the other pounds away.

When a hen is sitting across the top of a five-barred gate, why is she like a penny? Because she has a head on one side and a tail on the other.

What is the most dangerous time of the year to go into the country? When the trees are shooting and the bull-rushes out!

Why was the whale that swallowed Jonah like a milkman who has retired on an independency? Because he took a great profit out of the water.

Who is the most tender-hearted man in the world? The bell-man, because he will cry if you give him a shilling.

What is the key-note of good manners? B natural.

I am for ever, yet was never? Eternity!

When may you be said to literally "drink in" music? When you have a piano-for-tea.

What is the difference between an engine-driver and a schoolmaster? One minds the train and the other trains the mind.

Why is *o* the noisiest of all the vowels? Because you can't make a horrid loud noise without it, whilst all the others are inaudible.

Why can you never expect a fish-monger to be generous? Because his business makes him sell-fish.

When is a bonnet not a bonnet? When it becomes a pretty woman.

What is that which works when it plays, and plays when it works? A fountain.

In what tongue did Balaam's donkey speak? Probably in the He-bray-ic.

What is the difference between a fisherman and a lazy schoolboy? One baits his hook and the other hates his book.

What words may be pronounced quicker and shorter by adding syllables to them? Quick and short.

Why is it certain that *Uncle Tom's Cabin* was not written by a female hand? Because it was written by Mrs. Beecher's toe.

How many cows' tails would it take to reach from London to Ramsgate upon the rule of 11½ inches to the foot, and having all the ground levelled between the two places? One, if it were long enough.

Why are birds melancholy in the morning? Because their little bills are all over dew!

What is the difference between the Prince of Wales, an orphan, a bald-headed old man and a gorilla? The first is an heir apparent; the second has ne'er a parent; the third has no hair apparent; and the fourth has a hairy parent.

What is the difference between your last will and testament and a man who has eaten as much as he can? One is signed and dated, the other dined and sated.

When does a leopard change his spots? When he moves from one spot to another.

What would a pig do who wished to build himself a habitation? Tie a knot in his tail and call it a pig's tie!

Which are the lightest men—Scotchmen, Irishmen, or Englishmen? In Ireland there are men of Cork; in Scotland men of Ayr; but in England, on the Thames, we have lighter-men.

What extraordinary kind of meat is to be bought in the Isle of Wight? Mutton from Cowes!

Why is a miserly uncle with whom you have quarrelled like a person with a short memory? Because he is ever for-getting and never for-giving.

Why is a comet more like a dog than the dog-star? Because it has a tail, and the dog-star hasn't.

What was it a blind man took at breakfast which restored his sight? He took a cup and saw, sir!

When is a teapot like a kitten? When your teasin' it (tea's in it!).

When is a blow from a lady welcome? When she strikes you agreeably.

What's the difference between a professional pianoforte player and one that hears him? One plays for his pay, the other pays for his play.

How do we know Moses wore a wig? Because he was sometimes seen with Aaron and sometimes without 'air on.

What is the difference between an accepted and an unaccepted lover? One kisses his missis, and the other misses his kisses.

When is a fruit-stalk like a strong swimmer? When it stems the cur-rants.

Why is love like a canal boat? Because it's an internal transport.

Why is it easy to break into an old man's house? Because his gait is broken and his locks are few.

When were there only two vowels? In the days of No-a, before U or I were born!

What is the difference between love and war? One breaks heads, the other hearts.

What is that from which you may take away the whole and yet have some left? The word wholesome.

What sort of tune do we all enjoy most? For-tune, made up of bank-notes.

How many P's are there in a pint? One P!

Why would an owl be offended at your calling him a pheasant? Because you would be making game of him.

What is it gives a cold, cures a cold, and pays the doctor's bill? A draught.

What is that which is black, white, and red all over; which shows some people to be green, and makes others look black and blue? A newspaper.

What game do the waves play at? Pitch and toss.

What was Joan of Arc made of? She was Maid of Orleans.

When is a black dog not a black dog? When he's a grey-hound.

Why are sugar-plums like race-horses? Because the more you lick them the faster they go?

Which eats most grass—black sheep or white? White, because there are more of them.

When is a schoolmaster like a man with one eye? When he has a vacancy for a pupil.

If I buy four oranges for a penny, and give one away, why am I like a telescope? Because I make a far-thing present.

What letter in the Dutch alphabet will name an English lady of title? A Dutch S.

What is that which every one wishes for and yet wants to get rid of as soon as obtained? A good appetite.

What did the engine-whistle say to the stoker? Don't touch me or I'll scream!

Why is a waiter like a racehorse? Because he runs for cups and plates and steaks!

Why should the poet have expected the woodman to "spare that tree"? Because he thought he was a good feller.

What is that which is put on the table and cut, but never eaten? A pack of cards.

How many wives are you allowed by the Prayer-Book? Sixteen: viz., fo(u)r better, 4 worse, 4 richer, 4 poorer; total, sixteen.

What is that which lives in winter, dies in summer, and grows with its root upwards? An icicle.

Why have chickens no fear of a future state? Because they have their next world (necks twirled in this).

Why was the first day of Adam's

life the longest? Because it had no Eve.

Why is the nose on your face like *u* in civility? Because it is between two eyes.

Why is a little dog's tail like the heart of a tree? Because it is farthest from the bark.

When is an alderman like a ghost? When he's a goblin.

ENIGMAS

A short collection of enigmas, acrostics, and other exercises for the ingenious.

Guess what these are:—

We are little airy creatures,
All of different voice and features;
One of us in glass is set;
One of us you'll find in jet;
One of us is set in tin;
And the fourth a box is in:
If the last you should pursue,
It can never fly from you.

The Vowels: A. E. I. O. U.

Four things there are all of a height—
One of them cross'd, the rest upright;
Take three away, and you will find
Exactly ten remain behind;
But if you cut the four in twain
You'll find one half doth eight retain.

XIII. VIII.

Ever eating, never cloying,
Never finding full repast,
All devouring, all destroying,
Till it eats the world at last?

FIRE.

Through thy short and shadowy span
I am with thee, child of man;
With thee still, from first to last,
In pain and pleasure, feast and fast;
At thy cradle and thy death,
Thine earliest wail and dying breath.
Seek thou not to shun or save,
On the earth or in the grave;
The worm and I, the worm and I,
In the grave together lie.

The letter A.

There is a noun of plural number,
Foe to peace and tranquil slumber;
But add to it the letter s,
And, wondrous metamorphosis!
Plural is plural now no more,
And sweet what bitter was before!

CARES—CARESS.

Five hundred begins, five hundred ends it,

Five in the middle is seen;
The first of all figures, the first of all letters,

Take up their stations between;
Join all together, and then you will bring

Before you the name of an eminent king.

DAVID.

My *first* is a circle, my *second* a cross;
If you meet with my *whole* look out for a toss!

OX.

Without my *first* you'd look very strange,

My *second* you much want to be;
My *whole* is what many a lady has worn

At a ball, an assembly, or play,
NOSE-GAY.

My love for you will never know
My *first*, not get my *second*;
'Tis like your wit and beauty, so
My *whole* 'twill aye be reckoned.
END-LESS.

My *first* I hope you are,
My *second* I see you are,
My *whole* I know you are.

WELL-COME.

CHESS

The game of chess is played by two persons on a board containing sixty-four squares, alternately coloured black and white, or red and white.

Each player has eight pieces and eight pawns, one set usually yellow or white, and the other black or red. The pieces on each side are King, Queen, two Rooks, two Bishops, two Knights, with eight soldiers called Pawns, one belonging to each piece.

On commencing the game, the board should be set with a white square at the right-hand corner. The lines of squares running upwards are termed *files*, those from left to right are called *ranks* or *lines*, while those running obliquely are known as *diagonals*. The Rooks or Castles occupy the corners of the board, a Knight occupies the square next to each Rook, a Bishop is placed next to each Knight, and the King and Queen occupy the centre of the back row, the Queen always being placed on a square of her own colour, i.e., the white Queen on a white square,

and in the same file as the black Queen. The pawns occupy the second rank from the back of the board.

The moves of the several pieces are as follows, always remembering that, in placing the men, the Queen stands on her own colour :—

The King moves one square at a time, in any direction, and once in a game is allowed a jump of two squares, called Castling, which we shall explain presently. The King never leaves the board, and his person is sacred from arrest. When, however, he is forced into such a position that, were he any other piece, he would be liable to be taken, he is said to be in *check*, and when he is so surrounded that he cannot get out of check (either by moving, taking the adversary, or interposing a piece), he is said to be *mated*, and the game is over. Two kings are not allowed to stand next each other ; a vacant space must always intervene.

The Queen moves in lines in every direction, backward, forward, across, or diagonally, one or more squares at a time. Her power extends over all the unoccupied lines before her. She goes forward or retreats at pleasure.

The Rook or Castle moves only in right lines, up, down, or across the board, one or more squares at a time. His power extends over both the right lines unoccupied by his own or his opponent's pieces or pawns.

The Bishop moves to and fro diagonally on its own colour—the Black Bishop on the black, and the White Bishop on the white. The Bishops are also known as the King's Bishop and the Queen's Bishop, and they are always known as such by the colour of the square on which they move. Each Bishop commands the diagonal before it that is unoccupied by its own or its opponent's men.

The Knight has a peculiar oblique move entirely its own. From its place on the board it has three moves—to the Bishop's third square, to the Rook's third place, and to the place of the King's or Queen's Pawn, according to which side it belongs. Thence, by a series of forward or sideway jumps, it can pass over every square on the board. The other pieces require the interposing pawn removed before they

can get out from the positions they occupy at the commencement of the game ; but the Knight merely wants a vacant square on which to make his move, or in the case of an opponent's piece or pawn, removing it and taking its place.

The following are the pieces' places in the order of their value—the King first, which cannot be taken ; the Queen, the Rooks, the Bishops, and the Knights. Belonging to them, and called by their names, are King's Pawn, Queen's Pawn, etc., are the pawns, of which we shall now speak.

The Pawns are eight in number on each side. They move straight forward, one square at a time, except at their first move, when they have the privilege of moving two squares.

But they capture the enemy diagonally. They cannot retreat like the pieces ; but if they arrive at the last square on the opposite side, they may be exchanged for, or promoted to the rank of, any other piece. Thus, you may have two or more Queens, three or more Bishops, Rooks, or Knights. But the piece usually claimed is the Queen ; hence the move is generally called *going to Queen*. The amateur will soon discover that upon the proper handling of his Pawns much of the success of his game depends.

There is a move which is peculiar to the Pawns, and which is not generally understood even by tolerably good players. To explain : If a White Pawn, say, has moved forward into the fifth square, and a Black Pawn, in making the first move, takes a jump of two squares, the latter passes the empty square or field of his opponent. Then the White Pawn has the privilege of removing the black one from the board and passing into the square he previously guarded. This move is called "taking in passing" (*en passant*).

Castling is performed in this way : If the space between the King and the Castle be unoccupied, the King moves two squares from his place, and the Castle is brought to the side of the King farthest from his own proper square. Castling can only be done when neither the Rook or the King have been previously moved.

All the pieces capture in the direction of their proper moves. In taking, the player removes the piece or pawn from the board, and places his own piece on the unoccupied square, and not, as in Draughts, on the square beyond.

The Object of the Game is to checkmate the adverse King, that is, to force him into such a position that he cannot move out of check. When the King is in such a situation that, were he any other piece, he would be liable to be taken, he is said to be in *check*. It is then obligatory on him to do one of these three things—to move out of check, interpose a piece, or take the man that threatens him.

The whole art and mystery of chess is to bring such a force to bear upon the King as allows him no escape—when he is said to be checkmated, and the game is won.

To illustrate the simplest form of checkmate: suppose the Black King to be on his own square and the White King on the third square directly opposite, so as to leave only a single vacant square between, with a White Queen or Rook on either of the corners on the Black King's line—the latter is in check and cannot escape. The whole line is commanded by the Queen or Rook, and he cannot move next the opposing King.

STALEMATE is such a position of the King that, although not in check, he cannot stir without moving into check with one or other of the opposing pieces.

The Principal Laws of Chess, as here given, have been in use, with some slight exceptions, for over half a century:—

While a player holds the piece or Pawn he has touched, he may play it to any other than the square he took it from; but having once quitted it, he cannot recall the move.

If a player make a false move, i.e., play a piece or Pawn to any square to which it cannot legally be moved, his adversary has the choice of three penalties, viz.: (1) Of compelling him to let the piece or Pawn remain on the square to which he played it; (2) to remove correctly to another square; (3) to replace the piece or Pawn and move his King.

When a Pawn is first moved in a game, it may be played one or two squares; but in the latter case the opponent has the privilege of taking it *en passant* with any Pawn which could have taken it had it been played one square only. A pawn cannot be taken *en passant* by a piece.

A player cannot castle in the following cases: (1) If the King or Rook have been moved; (2) if the King be in check; (3) if there be any piece between the King and Rook; (4) if the King pass over any square attacked by one of the adversary's pieces or Pawns. Should a player castle in any of above cases, his adversary has the choice of three penalties: (1) Of insisting that the move remain; (2) of compelling him to move the King; (3) of compelling him to move the Rook.

If a player touch a piece or Pawn that cannot be moved without leaving the King in check, he must replace the piece or Pawn and move his King; but if the King cannot be moved, no penalty can be inflicted.

If a player attack the adverse King without saying "Check," his adversary is not obliged to attend to it; but if the former, in playing his next move, were to say "Check," each player must retract his last move, and he who is under check must obviate it.

Every Pawn which has reached the eighth or last square of the chess-board must be immediately exchanged for a Queen, or any piece the player may think fit, even though all the pieces remain on the board. It follows, therefore, that he may have two or more Queens, three or more Rooks, Bishops, or Knights.

If a player remain, at the end of the game, with a Rook and Bishop against a Rook, with both Bishops only, the Knight and Bishop only, etc., he must checkmate his adversary in fifty moves on each side at most, or the game will be considered as drawn; the fifty moves commence from the time the adversary gives notice that he will count them. The law holds good for all other checkmates of pieces only, such as Queen, or Rook only, Queen against a Rook, etc., etc.

A stalemate is a drawn game.

To these general laws a few hints—useful alike to amateurs and players—may be appended.

Do not linger with your hand on a piece or Pawn, or over the board, but decide first and move at once. Accustom yourself to play with either black or white, and practise various openings and defences.

After your King's Pawn has moved, it is well to move your pieces out before you move other Pawns, or you may be encumbered with your own men. Avoid useless checks. Remember that the object of the game is to checkmate, and not to win exchanges. Study every move before making one, and look well over the board to see what your opponent is about. When you see that your game is gone, do not unnecessarily prolong it, but give up gracefully and at once.

DRAUGHTS

Draughts is played on a board similar to chess; each player has twelve men, which move and take diagonally by passing *over* the opponent into an empty square; a man passing on to the last row of squares becomes a King, and has the power of moving backwards or forwards one square at a time; and the board must be so placed as to leave a double "tenantable" corner at the right hand of the player.

On commencing the game, each player has twelve men respectively placed on the white squares of the three first lines of the board.

The men being placed upon the board, the game is opened and continued by each player moving alternately; the right of the first move, as well as the choice of men, being with the white, or else decided by lot.

The men move forward diagonally, one square at a time on the white squares; but any man attaining the extreme line of the board assumes the name and power of a King, and is crowned by having another man placed on him. He can then move backwards and forwards indifferently, but not off the white squares.

The men capture in the direction in which they move, by leaping over any hostile piece that may be *en prise*, and taking up the vacant white square

beyond him; the captured piece being removed from the board.

From this it will be obvious, that any man left unsupported—that is, having a vacant white square on either line of diagonals behind him—is liable to be taken by any of the enemy's men in a position to effect the capture; and, moreover, that if several men are left unsupported in a similar manner, they may all, by possibility, be taken by one and the same man of the enemy at one and the same move.

The game is won by capturing or blockading the men of the adversary, so that he has nothing left to move; but occasions will occur when the number of men remaining on the board are very few and equal in number, and the players tolerably well matched, so that neither party can hope to gain much advantage; in such a case as this a persistence in play is rather a trial of temper than of strength, and courtesy will dictate to the young player to draw the game. With two Kings on each side, the game may be claimed as drawn by the player possessing the line of the double corner.

The principal laws of the game are as follows:—

It is optional with the player either to allow his opponent to stand the huff, or to compel him to take the offered piece.

In the losing equally with the winning game it is compulsory upon the player to take all the men he can legally take up by the same move. On making a King, however, the latter must remain on his square till a move has been made on the opposite side.

When a small number of men only remain in the game, either party having the minority of pieces may call upon his opponent to win in fifty moves, or declare the game drawn. With two Kings opposed to one, the game is declared drawn, unless it be won in, at most, twenty moves.

Two general hints for playing may be of some service:

It is judicious play to keep your men towards the centre of the board, in the form of a pyramid. Be careful to back up your advanced men so as not to leave a chance of your opponent taking two for one. A man on a side square

is deprived of half his offensive power.

Be careful to look well over the board before making your move; but let not your caution descend to timidity. Resolve the consequences of every move before making it.

DOMINOES

A set of dominoes usually consists of twenty-eight "stones." Each of these is divided into two compartments, and the number of points on each stone varies from the double-six downwards, through six-five, six-four, etc., to double-blank.

There are several ways of playing dominoes; the following method, for two players, is at once the most simple and the one generally pursued. The dominoes are placed on the table, with their faces downwards, and each player takes up one at hazard to settle which of them is to have the *pose* or right of playing first. The lowest number of points decides this. The two stones used in the trial are then put back among the rest; the dominoes are well shuffled together, and the two players choose seven stones apiece, ranging them upright in a line on the table, with the faces towards them, so that each may see his own hand, but not his adversary's. Thus the players will have taken up fourteen out of the twenty-eight stones of which an ordinary game consists. The other fourteen remain on the table, faces downwards, to form a reserve.

The winner of the *pose* now puts down on the table, face upwards, the domino that it suits him best to play (we shall give some advice on this subject presently). The adversary in his turn places a stone of his own, corresponding in one of its numbers with that placed by his adversary. Then suppose the first player to have played double-six, the second may play six-four; the first then puts six-five; the second follows it up with five-four; and the first plays the double-four—the single numbers being placed lengthways, the doubles transversely, and so the game proceeds till the player who has won the *pose* has expended all his dominoes, his adversary having one stone left—say six-three. In this case the first player (i.e., the player first out)

will count nine towards the game, that being the number of points in his adversary's hand. The game itself is won by the player who first scores a hundred. The dominoes are then shuffled again, the second player having the *pose* this time, and the game continues with a fresh deal.

Generally, however, things don't go so smoothly. After two or three dominoes have been placed by the two players, one of them is unable to match any of the stones in his hand with the numbers at each end of the row on the table. In that case he draws from the reserve as many cards (except the last two, which are always left untouched) as he thinks necessary to preserve his defence. When a "block" occurs, i.e., both players are compelled to pass, neither of them having a stone that will suit, they turn their hands face upwards on the table, and the one who has the smallest number of points counts both his own and his adversary's points towards his own game. When a block occurs the player whose turn it is to play next draws all the cards, excepting two, from the reserve, and they are counted up with his pips.

The general rule for the player who had the *pose* is to play out the number which occurs most frequently in your game. For instance, if the number four occurs four times in your hand, the chances are your adversary will have only one, or perhaps none at all of the same number, and he will thus be compelled to draw, and you will have less cards to play out.

It is good policy, too, to get rid of the higher numbers in your hand as soon as possible, for in case of a block he who has the lowest number of points wins. Get rid of the *doubles* also as soon as possible, for they are the hardest to place.

It will thus be seen that the game of dominoes is one of mingled skill and chance. Of course, nothing can avail against a lucky hand; but the combinations of the game are various enough to give scope for a good deal of ingenuity.

The system of not drawing from the reserve is sometimes played, but this is generally accounted a feeble game.

Generally the game is confined to

two players, but four, or even five may join in it, each playing on his own account, or four players may be divided into sides. With over three players the number of dominoes in a hand is only five. In the latter case the partners sit opposite to each other, the players having first drawn for partners, in the same way as they would for the *pose*, and the two highest playing against the two lowest. He who has drawn the lowest stone has the *pose*. The play is from left to right, and the side of the first player who is out wins, counting to its score the number of points still held by the remaining three players.

MATADOR

The game is commenced by the player who has the double six, or failing that the next highest double. The Matador game is played in much the same manner as the one described above, except that instead of matching the cards, they must be played in such a way that the pips on the half card played must total 7 when added to the pips on the half card they are played against: thus if a 2 is open at one end, and a three the other, the next player can either play a 5 against the 2 end, or a 4 against the 3 end, and so on. If a player "cannot go," i.e. play a card at either end to count 7, he must play a "Mat," which is either the 6-1, the 5-2, the 4-3 or the double blank. Each player starts with seven cards. A "Mat" can be played in any position, usually to make the best baulk to one's opponent. If a player has not a "Mat" and cannot go, he can draw all the reserve excepting two. When one player passes after the reserve has been drawn the other has to play. The player possessing the lowest number of pips at the finish of the game wins. Sometimes the Matador game is played in a way that only permits the player who cannot "go" to draw two at one time from the reserve; if he cannot go then it is his opponent's turn; next time only two may be drawn again, and so on until only two are left in reserve; these always remain.

BAGATELLE

Bagatelle is played on an oblong

board, in which there are nine cups or holes, and the object of the players is to place the balls in these cups, which are numbered from one to nine.

The several games played on the bagatelle-board are La Bagatelle (usually called the English game), Bagatelle à la Française (known generally as the French game), Sans Egale, Mississippi, and Trou Madame. Besides these there are Canon and the Irish games.

La Bagatelle.—This game is played by any number of players, from two upwards, with nine balls, two of which are usually coloured and count double. The red ball is placed on the spot and the player with his cue bowls the other coloured ball at it, endeavouring to hole it and his own ball by the same stroke. In the event of the two balls being holed at the first attempt, or if at any successive attempt the balls are all holed and the table cleared, the score is counted and the game restarted. He then plays with the other balls successively until the whole nine have been sent up the table. Any number of rounds may be played as agreed on at the commencement of the game, and he who obtains the greatest score wins the game. If the ball struck at rebounds from the cushion and passes the baulk line it is taken up, and is considered lost for that round. Sometimes two lines are drawn across the table, one to determine the baulk, and the other the lost balls.

This is an extremely easy game to play, and some people are so dexterous as to be able to fill all the holes, with the coloured balls in the eight and seven, in a single round. The coloured balls counting severally sixteen and fourteen, it is possible to obtain sixty in a single go; or if the red ball were placed into the centre hole (the nine) and the black in the eight hole, you may even score as many as sixty-two. But such a score is very unusual; a hundred in three goes being considered good play.

Mississippi.—This game is played by means of a bridge placed across the board and a couple of little cushions against the side. Each player strikes his ball against one of the cushions so as to make it rebound or canon on to the bridge, each arch of which bears a

particular number. When the ball passes through the bridge the player reckons the number of the arch to his score, and he who obtains the highest number in two or three rounds wins the game.

The Canon Game consists entirely of canons, and may be played any number up. It is played with three balls. There is not much art in making canons on a bagatelle board.

The French Game is usually a hundred up, and may be played by two or more players; two or four is the usual number. The score is taken, as in *La Bagatelle*, from the figures marked within the cups. The red ball is placed on the spot, and he who has taken the break strikes at it with the other coloured ball. If he succeeds in holing a ball at the start, he goes on till he fails; his adversary then plays, and so on alternately till the number determined is obtained. He who first gets that number wins the game. While either of the coloured balls remains out of a hole it must be played at, and he who fails to strike it forfeits five to his adversary. Missing a white ball counts one on the opposite side. Knocking a ball off the table is usually a forfeit of five, though sometimes no penalty is enforced. If a ball lies over a hole and does not fall immediately into it, the adversary may say, "I challenge that ball," when if it drops into the cup (from the vibration of the room or table, etc.) it must be replaced. This rule also applies to *La Bagatelle*.

The Irish Game consists of canons and winning hazards only. It is played with three balls, the canon counting two, and the hazard as many as is marked in the cup. If the player's own ball falls into a hole it counts to his adversary.

BILLIARDS

The shape and accessories of a billiard table are so well known that it is unnecessary to describe them here. In billiards three balls are used, one red, one plain white and another white with a black spot on it. The red ball is placed on a spot on the centre at the top of the table, about $12\frac{1}{2}$ inches from the top cushion. The two players then decide which ball they

shall play with, i.e. the "plain" or the "spot" ball, and they play with that ball only throughout the game. At the commencement of the game one of the players has to break. With his cue he propels his own ball up the table to hit the red ball, or he may give a miss, that is to say he may send his white ball to any part of the table, but if he wishes to leave it inside the baulk line (a line parallel with the bottom cushion and 29 inches from it) he must first strike a cushion out of baulk and come back inside. The objects of the game are as follows:—

1. To get canons, i.e. to hit your opponent's ball and the red with your own ball in the same stroke.
2. To make losing hazards, i.e. to hit either your opponent's ball or the red ball with your own in such a way that it runs into a pocket.
3. To make winning hazards, i.e. to hit the red or opponent's white ball, and drive it into a pocket.

The score is counted in the following manner:—A canon counts two points to the scorer; a losing hazard off the red three points; off the white, two points; a winning hazard (potting the red), three points; potting the white, two points.

If a player gives a miss—does not hit either of the balls—his opponent scores one. If his ball goes into a pocket without touching either of the other balls, his opponent scores three. If his ball goes off the table, the opponent scores two. In the event of any one of these three happenings, the player loses his turn, and his opponent plays. After scoring once, a player continues to play until he fails to score.

As many results as are scored in a stroke are counted together, e.g. a ro stroke is scored if the player's ball first hits the red ball, pots it, hits the white, pots that, and also enters a pocket itself.

If the red ball is upon the spot and from there is potted twice in succession, it is then placed upon a spot in the middle of the table, and after being potted from there is returned to the spot at the top of the table. An opponent may claim a foul if the other player makes a stroke which infringes any rule of the game. If a player is in

hand, and the other two balls are within the baulk area, his ball must touch a cushion outside baulk before it can enter there.

It is impossible to give any general hints in the short space allotted to this article, but one fundamental rule which very few beginners ever seem to realize may be mentioned. Where the cue is directed is where the striker's ball will hit, no matter what part of his ball may be struck. That is to say, if an imaginary line be drawn along the cue through the playing ball straight to the object, the playing ball will hit the object where the line arrives.

POOL

Pool is a game played on an ordinary billiard table, with coloured balls, by any number of players from two to eight.

At the commencement of the game each player has three lives on the score board and the white ball is placed on the billiard spot at the top of the table, the red ball plays from inside the "D" of baulk as the white, the yellow ball plays from the same spot at the red, the green plays on the yellow, and so on. The object of the play is to drive the ball of the player who plays previously to you into one of the pockets. When this has been accomplished, the player who has had his ball potted, loses a "life," and the player who has driven the ball down now endeavours to pot the ball nearest to his own, and he continues to play while successful until the last ball is potted, when his ball is placed upon the spot at the top of the table and the other players commence play in their proper sequence. Each player has three lives, and under certain circumstances the first player who loses three "lives" is entitled to "star," that is, to receive the same number of lives as that possessed by the least on the board. The baulk is no protection in this game, and if the player's ball goes into a pocket when played by himself, he loses a life. When a player has lost all his lives, he retires from the game, which is continued until only two players remain. The last two players divide the pool when their "lives" are equal in number; the one who potted

the last ball has a stroke before doing so. Under certain circumstances, if there is a ball obstructing a player's execution of a stroke, or intervening between his ball and the object he has to play on, he can have the obstructing ball removed from the table while he plays. There are many minor points and rules in this game.

PYRAMIDS

This game may be played by any number of persons with 16 balls—1 white and 15 red. The 15 red are made up in the form of a solid triangle, with its apex on the pyramid spot, i.e., about half way between the centre and top of the table.

The object is to pot the red balls without letting the white go into a pocket. At the commencement of the game one of the players hits the pyramid with the playing ball, and if he succeeds in putting a red down, he continues playing until he fails to score, when the succeeding person plays. For each ball potted, one is scored, and it is permissible to pocket two or three with one shot. If a player makes a miss, i.e. does not hit an object ball, or drives the playing ball into a pocket, one is deducted from his score, and one of the balls already pocketed is replaced on the table, either on the pyramid spot, or, if that is occupied, as nearly as possible behind it. When 14 of the red balls have been pocketed, the one who pocketed the last ball continues playing with the plain ball, and the other player plays with the red ball thereafter, and endeavours to pocket the white, and so they go on alternately until either one or the other enters a pocket, when the game ends. Two points are usually allowed for scoring the last ball.

RUSSIAN POOL

Unlike other pool games, this is a game in which the ordinary billiard game prevails to a great extent. At the commencement of the game the red ball is placed on the billiard spot, the brown ball on the middle spot, and the yellow and green on the right and left hand spots of the "D" of baulk respectively. White is the playing ball. The game can be played by any

number of players, and the objects of the game are as follows:—Firstly, to make a canon with the playing ball, that is with the white ball to strike any two of the coloured balls; secondly, to make a winning hazard with, or "pot" any of the coloured balls, and thirdly to make losing hazards with the white off any of the coloured balls. Each ball, however, has its own particular pocket or pockets, and if it is played into a wrong one the player of the stroke loses the number of points that the ball counts.

A winning or losing hazard may be made with the red ball in either of the pockets at the top of the table; a winning or losing hazard may be made with the brown ball in either of the pockets in the middle of the table; a winning or losing hazard may be made with the yellow ball in the right hand pocket at the bottom of the table and with the green ball in the left hand pocket at the bottom of the table. This seems to be becoming a very popular game, but no general rules prevail in regard to it. In most clubs, etc., the score is reckoned in the following manner:—

Winning or losing hazard with the Red, 3.

Winning or losing hazard with the Yellow, 4.

Winning or losing hazard with the Green, 5.

Winning or losing hazard with the Brown, 9.

For a canon, 2.

A player in hand can play inside the baulk line excepting for the stroke that commences the game, when he must play at the red. If a player aim at a ball and miss it, he gives away from his score the value of the object ball or the value of the highest ball that his ball touches in the course of the stroke.

SNOOKER POOL

This game is very much like pyramids, but is played with 22 balls. The pyramid of 15 red balls is set up with the triangle with its apex on the pyramid spot, the black ball is placed on the billiard spot at the top of the table, the pink ball in front of the pyramid, a blue ball on the spot in the

centre of the table, the other three balls are placed on the baulk line on the three spots of the "D," the yellow on the right hand side, brown in the middle, and green on the left hand side, from the bottom of the table.

White is the playing ball, and at the commencement of the game it is played from inside the "D" with the object of potting a red ball. After a player has potted a red ball, he has the option of potting any of the coloured balls, and if he succeeds, he next plays on another red ball, and if successful another coloured ball, and so on until he stops scoring, when the succeeding player takes his turn.

Scoring is reckoned as follows:—Whenever a red ball is potted, 1; and for the coloured balls, yellow = 2, green = 3, brown = 4, blue = 5, pink = 6, black = 7. If a player is snookered, that is to say, a ball other than the one at which it is permissible for him to aim at, is in his firing line, he must play at the ball it is necessary for him to hit. If he misses it, he has deducted from his score the value of the ball at which he aimed, and if he first hits another ball, he loses the value of the ball worth most points, e.g. if he were aiming at a red ball and did not hit anything at all, he would lose one point. If he were aiming at a red ball, missed it, and hit the black, he would lose seven points. After a red ball has been potted, it remains in the pocket, but coloured balls are replaced on the table, on their original spots, until all the red balls have been pocketed. Then the players play the remaining balls in their sequence of value (yellow, green, brown, blue, etc.), and as they are pocketed they remain down until the black disappears and the game ends.

If the playing ball goes into a pocket, the player gives away the value of the ball at which he was aiming, even in the case of that ball going down itself. The following player then plays from the "D" of baulk, but in this game, as in pyramids, it is permissible to play a ball inside the baulk area if the player is "in hand."

CARDS

All-Fours.—Among the minor games

GAMES AND AMUSEMENTS

at cards, All-Fours holds a deservedly high place. Although not often played in the clubs, or by what are called first-rate people, it is, nevertheless, a good, amusing game. It is played with a complete pack of cards, usually by two persons, but sometimes by four, in two partnerships. It derives its name from the four chances of which it consists, for each of which a point is scored; namely—

High, the ace of trumps, or next best trump in the non-dealer's hand.

Low, the deuce of trumps, or next lowest out, which is reckoned by the person to whom it is dealt.

Jack, the knave of trumps.

Game, the majority of pips, collected from the tricks taken by the respective players. The cards from which this is obtained are, ace, king, queen, knave, and ten of trumps. The ace reckons for four pips, the king for three, the queen for two, the knave for one, and the ten for ten.

The cards rank in the same order as at Whist, and nine or ten points constitute the game; the best mode of marking them is by counters, as at Whist, or by two cards.

Each player cuts for deal, and the lowest is dealer. The deal is made by giving one card alternately, until each player has six, and turning up the thirteenth card, which is trump. If the card turned up is a knave, the dealer scores one point to his game; but the knave of trumps in hand does not reckon, unless you make a trick with it; for if your adversary takes it with the ace, king, or queen, he scores it.

Endeavour to make your knave and ten of trumps as soon as you can, as they are reckoned by the person in whose tricks they are.

Always win your adversary's best cards when you can, either by trumping them or with superior cards of the same suit. In every other respect the game is played the same as Whist.

LAWS OF THE GAME.—If, in dealing, the dealer shows any of his opponent's cards, the opponent may demand a fresh deal.

The dealer, giving his adversary more cards than are required, there must be a new deal; or if both parties

agree, the extra cards may be drawn by the dealer from his adversary's hand. The same if the dealer give himself too many cards. But in either case, if part of the cards have been played, a new deal must take place. You cannot *beg* more than once in a hand, unless both parties agree.

With strict players, the adversary may score a point whenever his opponent does not trump or follow suit, and each calculates his game without inspecting the tricks, which, when erroneously set up, must not only be taken down, but also the antagonist either scores four points or one, as shall have been agreed upon.

There are several varieties of the game of All-Fours, but enough has been said to make the reader comprehend it.

In the game called **Blind-all-Fours**, the first card played by the non-dealer is trumps; and, with this exception, the foregoing rules are identical in both games.

All-Fives is another variety, in which the five of trumps counts five on the cribbage-board; the king, three; queen, two; ace, four; knave, one; and ten, ten. The game is sixty-three up, and is played like All-Fours.

Banker.—Banker is a game that may be played by any number of players, and the cards take the same precedence as at whist, i.e. ace is the highest and deuce is the lowest. At the beginning of the game a card is dealt to each of the players and the holder of the highest card becomes "Banker." The banker then deals a card face downwards upon the table to each person partaking in the game. The players next place a stake upon any of the cards, usually their own, taking care to leave one card free for the banker. The banker then covers each of the stakes with a similar one, and turns up the free card. The other cards are now turned, and the banker takes all stakes on cards lower than his own, and the players who have cards higher than the banker's collect the counters on the cards they staked on. Should another card of the same value as the banker's appear, the banker takes the stakes as if the card were of less value than his own. Should the banker lose to all the

players in one hand, the player who had the highest card becomes banker. The banker can always sell the bank to the highest bidder.

Bézique.—This is a good game for two, three, or four players.

It is played with two packs of cards, from which the twos, threes, fours, fives, and sixes have been discarded—in all, therefore, sixty-four cards, of which there are two of each sort. Of the game may be played with four or six prepared packs—nine cards being dealt to each player.

MODE OF PLAY.—The cards are shuffled, both packs together, and the players cut for deal. The lowest card cut wins the deal. In play the cards are reckoned in the following order: Ace, ten, king, queen, nine, eight, seven. The deal being determined, eight cards are given alternately to each player, as in Cribbage, and the seventeenth card is turned up for trumps. The non-dealer plays first by leading with any card in his hand, to which the other replies. If he win or trump it, he has to lead; in every case the winner of the trick having the next lead. Before playing, however, each player draws a card from the pack—the winner of the last trick drawing the top card, the other player taking the rest; by which means the cards in each hand are restored to their original number—eight. By this process of alternate drawing and playing a card the stock is at length exhausted. In playing, the highest card of the same suit wins the trick. In the case of ties, the leader wins. Trumps win other suits. The tricks are left face upward on the table till the end of the lead; they are of no value but for the aces and tens they contain. The objects of the play are to win aces and tens, and promote in the hand various combinations of cards which, when "declared," score a certain number of points.

Declaring.—A declaration can be made only immediately after winning a trick, and before drawing a card from the pack. It is done by placing the declared cards face upward on the table. Players are not obliged to declare unless they like. A card cannot be played to a trick and declared at the same time. Only one combination

can be declared to one trick. In declaring fresh combinations, one or more cards of the fresh combination must proceed from the part of the hand held up. The same card can be declared more than once, provided the combination in which it afterwards appears is of a different class. The player scoring the last trick can, at the same time, declare anything in his hand, after which all declarations cease.

Variations in the Game.—It may be played by three or by four persons. If by three, they all play against each other, and three packs of cards are used.

Number of Packs.—If four play, four packs are used, shuffled together; but this is considered as being a very complicated game.

Diminished Scores.—Some players consider the double bézique and sequence scores as too high, and therefore make the score for the former 300, and for the latter 200.

The last Trick.—This is understood sometimes to mean the thirty-second trick, or last of all. This, however, is supposed to be an error arising from incorrect nomenclature.

Aces and Tens.—These are sometimes not scored till the end of the hand.

Scoring.—The score may be kept with a bézique-board and pegs, or by a numbered dial and hand, or by means of counters—which last method is the best.

THE SCORE.

Bézique—queen of spades and knaves of diamonds	40
Double bézique—two queens of spades, and two knaves of diamonds	500
Sequence—ace, ten, king, queen, and knave of trumps	250
Four aces	100
Four kings	80
Four queens	60
Four knaves	40
Royal marriage—king and queen of trumps	40
Common marriage—king and queen of any suit not trumps	20
Turning up the seven of trumps	10
Playing the seven of trumps—except in last eight tricks	10
Exchanging the seven of trumps for the trump card	10
The last trick	10

Each ace and ten in the trick—at
end of each deal . . . 10

FORFEITS.

For drawing out of turn . . . 10
For playing out of turn . . . 10
For playing without drawing . . . 10
For overdrawing . . . 100
For a revoke in the last eight tricks. All
the eight tricks.

Bézique, Treble.—An extra pack of cards is needed for each other player ; so that, in the case of three, the trump card is the twenty-fifth and four the thirty-third.

The game is always played from left to right, the first player on the left of the dealer commencing.

Three-handed bézique is sometimes played with two packs of cards, suppressing an eight, thus rendering them divisible by three.

Bézique, Four-handed.—Four-handed bézique may be played by partners chosen by cutting. Partners sit opposite each other, one collecting the tricks of both, and the other keeping the score, or each may keep his own score.

A player may make a declaration immediately after his partner has taken a trick. He may inquire of his partner if he has anything to declare, before drawing.

Declarations must be made by each player separately, as in Two-handed Bézique.

Bridge.—Bridge is a game very like ordinary "Whist." The cards are of the same playing value, and the rules as to dealing, etc., are the same. But with "Bridge" the hand opposite the dealer is always exposed after trumps and doubling have been settled and the first card has been played, and the dealer instructs his partner (who takes no part in the hand) which cards he shall play—that is, he plays two hands himself. The value of tricks and honours differs largely from ordinary whist, the method of making trumps is different, and in Bridge the normal value of the tricks may be doubled or redoubled.

Bridge is played with an ordinary pack of 52 cards, the players cut for partners, and for deal. The cards are shuffled, cut and dealt one at a time until each player has thirteen. The dealer,

when he has examined his hand, has the option of declaring which suit shall be trumps, or whether the hand shall be played without trumps. If he does not care to name trumps or no trumps, he may leave it to his partner. If the partner should not wish to name trumps, the player on the left of the dealer may demand that there shall be a new deal, or that the dealer's partner shall make a declaration.

DOUBLING OR RE-DOUBLING.—The effect of doubling and re-doubling is that the value of each trick above 6 is doubled or re-doubled. After "trumps" or "no trumps" have been declared the hand on the left of the dealer has the right to double. If he does not wish to double he may ask his partner if he shall lead, and his partner may reply yes, or that he will double. If either of the dealer's two opponents decide to double, the dealer or his partner in due sequence of play then has the option of re-doubling. Doubling may continue until the limit of a hundred points is reached. When the matter of doubling or not has been settled, the game commences. A game consists of 30 points, obtained by tricks alone and exclusive of points obtained by anything else (honours, etc.). Every hand is played out, and points in excess of the 30 are also counted in the final score. Scoring counts as follows:—

When spades are trumps, every trick beyond 6 counts 2 points ; when clubs are trumps, every trick beyond 6 counts 4 points ; when diamonds are trumps every trick beyond 6 counts 6 points ; when hearts are trumps, every trick beyond 6 counts 8 points ; and when there are no trumps every trick beyond 6 counts 12 points. The honours are ace, king, queen, knave and 10 of the trump suit. Honours held jointly between the two partners reckon as follows:—Five honours of the trump suit score five times the value of a trick in that suit. Any four honours of the trump suit score four times the value of a trick in that suit. Any three honours of the trump suit score twice the value of the trick in the trump suit. If a player in his own hand holds the five honours of the trump suit he scores for this ten times the value of a trick in trumps. Any four

honours of the trump suit in one hand score eight times the value of a trump suit trick. With such a hand, if the partner of the holder of the four honours has the fifth, they score the value of a trick in trumps in addition to the value of the other four honours. The value of honours is the original value, e.g. two points in spades, and is not affected by any doubling that may have taken place. Where there are no trumps, if a player holds in his own hand the four aces, he scores 100. If the player and his partner have the four aces between them they score for honours 40 points.

When a player and his partner capture the whole 13 tricks, they score an additional 40 points for a "Grand Slam." When they capture 12 tricks they score 20 for a "Little Slam."

If a player holds no trumps, he scores the value of a trick in the trump suit for "Chicane," but this value is in no way affected by "doubling." In all cases the two partners' scores are reckoned and scored together. The dummy player takes no part whatever in the play.

The following is an example of the way to score. Scoring is done on a tablet similar to the opposite diagram.

The winners of the first hand, we will suppose, have won 10 tricks in clubs. So having 4 tricks over six they score 16 points, and the 16 points are inserted in the first column in the lower half of the table. The winners of these tricks also held in hand 5 honours, i.e. in clubs, valued 20, which they score in the top half of the table. The next deal is now played with diamonds as trumps. The second two players, we will suppose, won this by two tricks, value 12, which are scored in the second column below the line, and the same two players, we will say, score 12 for honours.

At the next hand we will suppose that the first two players score another 16 by tricks. These are put down in the first column and honours put above to whichever side they belong, and having now exceeded 30 a line is drawn underneath the tricks and above the honours, and a new game started upon. When 30 points have been scored, if they have been reached by the second

SCORING TABLETS.

A & B.	C & D.		
—	12		
20	—		
HONOURS.		HONOURS.	
TRICKS.		TRICKS.	
16	—		
—	12		
16	—		

two players, a new game is to commence to decide the rubber, i.e. the winner of two games out of three, but if the rubber is won in the first two games it is finished, and a third hand is not played. The winners of the rubber have 100 points added to their score, and the whole of the points earned by honours and tricks are now added together, and from it is deducted the total addition of the tricks and honours earned by the opponents. After subtracting the one from the other, the score remaining shows the number of points that the winners have won by.

Auction Bridge.—This is played as ordinary "Bridge," but a great deal of the "Poker" element is worked into it, i.e. bluff and working up of stakes. It

is a gambling game, and does not need a place in this book.

Cribbage.—Cribbage is played with a full pack of fifty-two cards, and an oblong board with a double row of sixty-one holes and two pegs (that may be of ivory, or lucifer matches with the phosphorus ends cut off) on which, and with which, the points of the game are marked. There are several different games, known as Five-card, Six-card, and Eight-card Cribbage, but the five and six card are the most usually played.

The value of the cards in Cribbage differs somewhat from their value in Whist. All the court-cards and tens are counted as ten each; the ace is counted as one, and the rest of the cards according to their number of pips. The points of the game are made by fifteens, pairs, flushes, and sequences, and last cards for the "go;" and the game is won by the player who first scores 61 on the board.

The game (Five-card Cribbage, for two players) is then played in the manner following:—

The players, having determined which is to deal by cutting the cards, the holder of the lowest cut deals five cards to each, one at a time, face downwards, on the table. The non-dealer then marks three holes as an equivalent for the supposed advantage derived by the dealer, who has the first crib. Two cards are then thrown out from each hand to form the "Crib," and the non-dealer cuts off a number of cards (not fewer than three) from the pack on the table, and the dealer turns up the top card, which remains exposed on the top of the pack throughout the deal. If the turn-up be a knave, the dealer marks "two for his heels."

The points of the game are made either in play, or in the final count, thus:—

	Points.
For every fifteen	2
Pair, or two of a sort	2
Pair-royal, or three of a sort	6
Double pair-royal, or four ditto	12
Sequences and flushes, whatever their number over and including three —not less.	
Knave in hand of the turned-up suit	1
Knave turned up	2

THE PRINCIPAL LAWS OF THE GAME
—The players cut for deal. The ace is lowest in cutting. In case of a tie they must cut again. The holder of the lowest card deals.

The dealer shuffles the cards, and the non-dealer cuts them for the "start."

The non-dealer throws out for the crib before the dealer. A card once laid out cannot be recalled, nor must either party touch the crib till the hand is played out.

Cribbage, Four-Handed.—This game is played by four persons in partnership. In principle it is exactly the same as the five-card game, and in practice it only varies in the larger scores attainable. At the commencement of the sitting the division of the players is decided by cutting; and five cards are dealt to each player, who discards one for the crib. The laws of the game are the same as in five-card cribbage. One of the partners on each side keeps the score, and partners are allowed to count for each other, and remark on any irregularity in the score, etc.

Cribbage, Six-Card.—This game differs only in the fact that six cards are dealt instead of five, and that, instead of packing the cards at the "go" or 31, the play continues for another "go," until all the cards are played out, the holder of the last card being entitled to score one. The player who fails to score the "go" restarts for the next 31. The principle of the game is precisely the same as five-card cribbage. The average hands and crib are proportionally larger than at five-card cribbage, and so it is often played with a double length (i.e. 121 points) score.

Cribbage, Three-Handed.—This game differs from the others only in the fact that each player plays for himself. Five cards are dealt to each player, who takes the deal in turn. Each player throws out a card for the crib, and a sixteenth is taken from the pack to complete the four. A triangular board is usually employed, and each player keeps his own score. The laws regulating the game are the same as for five-card cribbage, and the same calculations may be used, except that the hands and crib are relatively larger. Sometimes the game is played as in five-card cribbage, one player standing

out in each deal, which passes in rotation.

Euchre.—"Euchre" is played by two, three or four players, from a pack of cards from which the twos, threes, fours, fives and sixes have been discarded. The cards take rank as in Whist, with this exception: the knave of trumps—the Right Bower—and the other knave of the same colour—the Left Bower—take precedence over the rest of the trumps. Thus when hearts are trumps, the cards rank thus:—

Knave of hearts.

Knave of diamonds.

Ace, king, queen, ten, nine, eight, and seven of hearts.

When diamonds are trumps, the knave is the Right Bower, and the knave of hearts Left Bower.

In like manner, if clubs are trumps, the knave is Right Bower, and the knave of spades Left Bower; and if spades are trumps vice versa, the rest of the trump cards taking rank as already shown—from ace to seven.

The players cut for deal, the higher cut winning.

The cards are dealt in twos to each player; and then threes, or three to each first, and then two.

The eleventh card is turned up and is the trump.

Five points constitute the game.

The player winning three or four tricks, counts one point, but if he should win all, two points.

The first player looks at his hand, and if he considers it strong enough to score (that is, to win at least three tricks), he can say, "I take it up"—meaning that he will discard one of his cards, and take the trump card into his hand in its stead.

If, on the other hand, he does not feel strong enough, and desires a change of trumps, says, "I pass."

In the case of the first player "taking it up," the game begins. He plays a card and the dealer is compelled to follow suit, if he can: if not, he may play a smaller card, or trump.

The winner of the trick then leads, and so on till all the ten cards are played.

If a player "take the card up" and fails to make three tricks, he is euchred—and his opponent counts two points.

If the player, not being strong enough, "passes," the dealer can then say, "I'll play," and take the trump card into his hand; but as in the last case, if he fails to score, he is euchred.

If both "pass," the first player has the privilege of altering the trump, and the dealer is compelled to play; if, however, the former fail to score, he is euchred.

If he "pass" for the second time, the dealer can alter it with the same penalty if he do not score.

If both "pass" for the second time, the first player deals a new hand.

When trumps are led, if you have no other than the Left Bower you must play it, when it counts the same as a trump.

The score is marked by a two and three spot card, each player marking his own score.

Euchre, Three-Handed.—In this game fifteen cards are dealt, in the same manner as in two-handed, the elder hand leading.

The rules are the same as in the last game, the tactics in some cases being different.

If one player has scored four points, and the other two a point each, it is allowable for them to help each other, so as to prevent the other winning.

Euchre, Four-Handed.—Partners (two and two play) in this game.

Players can "take the card up" in the first round, but are euchred when they fail to score three tricks.

The tricks taken by both partners count towards for points.

If all "pass," the first round, the elder hand can alter the trump; should he decline, the second, and so on.

If a player is very strong, when it comes to his turn, he can say, "I can play alone." His partner then throws down his hand, and he then plays against the other two. If he obtain all the tricks, he counts three; if three or four, only one; if only two tricks, he is euchred.

The rest of the rules are the same as in two-handed Euchre.

Matrimony.—The once fashionable, and always pleasant, game of Matrimony, is played with a perfect pack of cards and counters, by any number of ladies and gentlemen, from five to fourteen. The game consists of five

chances, usually marked on a board or sheet of paper, thus :—

Best.

The Ace of Diamonds turned up.

Confederacy.
King and Knave.

INTRIGUE;	
OR,	
QUEEN AND KNAVE.	

Matrimony.
King and Queen.

Pairs.

The Highest.

It is played with a full pack of cards ; the ace of diamonds being highest, and, when turned up, sweeping the whole pool.

The dealer commences by placing a stake on each or any chance—that is, on the part of the board marked Intrigue, Confederacy, Matrimony, etc.

The other players deposit each the same number, except one ; that is, when the dealer stakes twelve, the rest of the company lay down eleven each.

After this, two cards are dealt round to each player, beginning on the left, then to each person one other card, which is turned up, and he who so happens to get the ace of diamonds sweeps all ; if it be not turned up then, each player shows his hand, and any of them having Matrimony, Intrigue, etc., takes the counters on that point ; and when two or more persons happen to have a similar combination, the eldest hand has the precedence ; and, should any chance not be gained, it stands open to the next deal.

The ace of diamonds, as before observed, wins the whole pool, but when held in hand ranks only as any other ace ; and, if not turned up, nor any ace in hand, then the king, or next superior card, wins the chance styled the best.

This very amusing game is peculiarly adapted for social parties, and is productive of much fun when played correctly. As will be seen, it is extremely simple in its nature.

Napoleon, or Nap.—This is a game of chance played by any number of players from two to six—four or six is an ideal party—with any number beyond this it is best to break the party into two, and have two sets of games.

The game is played with a pack of

fifty-two cards, and the players may cut for deal, or allow one of their number to deal the separate cards out face foremost, and the one who first receives an ace is to deal. The dealer deals out five cards, one at a time to each player, and the remainder of the cards are put aside. The player on the left of the dealer now has the option of "calling." After inspecting his cards, he must decide how many tricks he thinks he can make (the cards taking rank as at whist), and the caller makes his own trumps, that is to say the suit of the first card he plays is trumps. All the other players play against and endeavour to take the tricks jointly between themselves, i.e. one of them would beat the caller's card, but would not take the trick of his "partner's," unless necessity or finesse demanded it.

A caller cannot call "one," that is to say, that he will make one trick, but he may call 2, 3, 4 or nap (5), and he has to make the number of tricks that he calls. In the event of the player on the left of the dealer deciding to "pass" (i.e. not to call at all), the player on his left has the option, and if he calls, he plays first. The player next to the caller, and those following, may pass, or may in their proper turn call higher than the first caller, in which event the "call" lies with them unless the first caller goes higher still.

In some circles it is usual when "Nap" has been called, for the caller to draw the top card, and to either keep or return it. In the event of his keeping it, he has to discard one from his own hand. The one who takes a trick leads out for the next.

Points are scored in the following manner :—The caller, if he wins, takes from each player the number of points that he scores (e.g. two from each player) ; if he loses he gives the points he has called (e.g. two to each of the other players).

"Misère" is sometimes introduced into Napoleon, and in "misère" (which is usually reckoned in value three points, though below three in precedence of call) the caller has to lose every trick. He first plays a low card, and all the other players jointly try to avoid taking it. Subsequently their whole

endeavours are centred in trying to make the caller capture a trick. Doubling and trebling are allowed by arrangement.

Patience.—There are said to be thousands of ways of playing Patience, but the following are two of the most popular—

1. After shuffling the pack, deal out thirty-five cards in five rows containing seven cards each, face upwards. Retain the rest of the cards in the left hand, and turn up the first card on the table. Now, if you are able, build a sequence up or down on this card, drawing open cards from those exposed, that is, cards in the front row. Of course, when the card from the front row has been drawn, the card in the second row may be taken. For example; suppose the card turned up is a 4 and there are a 3, a 2, a 4, a 3 and a 3 in the front row, they would be built up in sequence on the card drawn from the pack, i.e. 4, 3, 2, 3, 4, 3. When a stop occurs, the next card is turned up from the pack in hand, and the game proceeded with as before. The object of the game is to build in sequences, up or down, all the 35 exposed cards, before the end of the pack in hand is reached.

2. In this game, four piles of cards each containing from the Ace to the King in proper sequence (though not necessarily of the same suit) have to be made. While the player is waiting for the required cards to turn up, he builds them in a temporary row of four packs, from which he may draw top cards only.

For example, after the cards have been shuffled, he turns up the top card, which we will say is a King. This he places in the back row. The next card turned up is a Queen, which he places on top of the King. His next is a King, which he would place as the base of his second drawing pack. (He would not cover the Queen while he could avoid doing so.) The next is a two and the next a three. Each of these would form the base of a drawing pack. The next card turned up we will say is a Jack, which is placed on top of the Queen, and the next card is an Ace, which forms the base of the first pack the player wishes to build. He now

draws the 2 and then the 3 from the "drawing packs," and then proceeds as before until he has either accomplished his object or perhaps failed to do so.

Picquet.—Picquet is a game for two players. In preparing the cards, the twos, threes, fours, fives, and sixes of each suit are discarded from the complete pack, leaving thirty-two cards, which have the same relative value as at whist. The game consists of 101 points, and the usual mode of marking them is by cards, viz., the six and three of any suit to denote the units, and the six and three of another suit for the tens, laid over each other so as to exhibit a number of spots equal to the points gained.

MODE OF PLAYING PICQUET.—On commencing the game, the players cut for deal, and he who cuts the lowest card is dealer. The deal is made by giving two cards alternately until each player has twelve. The remaining eight cards are placed on the table. The non-dealer has considerable advantage, from being elder hand.

The players having examined their hands, the elder hand takes the five cards which seem the least necessary for his advantage, and, laying them aside, takes as many from the *talon* or heap that is left; and the younger hand lays out three, and takes in the last three of the *talon*.

When you have *carte blanche*, you must let your adversary discard, and, when he is going to take his share from the *talon*, you must, before he has touched it, show your twelve cards, and your adversary must not touch the cards he has discarded.

In discarding,* the first intention in skilful players is to gain the cards, and to have the point, which most commonly engages them to keep in that suit of which they have the most cards, or that which is their strongest suit; for it is convenient to prefer, sometimes, forty-one in one suit to forty-four in another in which a *quint* is not made; sometimes, even having a *quint*, it is more advantageous to hold the forty-one, where, if one card only is taken, it may make it a quint-major, and gain the point, or the cards, which could not have been done by holding

the forty-four, at least without an extraordinary take-in.

Endeavour, in laying out, to get a *quatorze*, that is, four aces, kings, queens, knaves, or tens, each of which reckons for fourteen. If you have four aces, you may reckon also any *inferior quatorze*, as of tens, and your adversary cannot reckon four kings, though he should hold them, the stronger annulling the weaker. In like manner you can count three aces, and inferior threes down to tens, while your adversary is not entitled to count his three kings, etc. *Quatorze* kings, if neither player has four aces, annul queens, and queens annul knaves in the adversary's hand, by the same rule.

The same is to be observed in regard to the *huitièmes*, *septièmes*, *sixièmes*, *quints*, *quarts*, and *tierces*, to which the player must have regard in his discarding, so that what he takes in may make for him.

The point being selected, the eldest hand declares what it is, and asks if it is good. If his adversary has not so many, he answers, *it is good*; if he has just as many, he answers, *it is equal*; and if he has more, he answers, *it is not good*; he who has the best counts as many for it as he has cards which compose it, and whoever has the point counts it first, whether he is eldest or youngest; but if the points are equal, neither can count; it is the same when the two players have equal *tierces*, *quarts*, *quints*, etc.

The points, the *tierces*, *quarts*, *quints*, etc., are to be shown on the table, that their value may be seen and reckoned; but you are not obliged to show *quatorzes*, or threes of aces, kings, etc.

After each has examined his game, and the eldest, by the questions he asks, sees everything that is good in his hand, he begins to reckon. The *carte blanche* is first reckoned, then the point, then the sequences, and lastly, the *quatorzes*, or threes of aces, kings, etc.; after which he begins to play his cards, for each of which he counts one, except it is a nine, or an inferior one.

After the elder hand has led his first card, the younger shows his point, if it is good, also the sequences, *quatorzes*, or threes of aces, kings, etc., or *carte blanche*, if he has it; and, having

reckoned them altogether, he takes the first trick if he can with the same suit, and counts one for it; if he cannot, the other turns the trick, and continues; and when the younger hand can take the trick, he may lead which suit he pleases.

To play the cards well, you must know the strength of your game, that is, by your hand you should know what your opponent has discarded, and what he retains. To do this, be particularly attentive to what he shows and reckons.

As there are no trumps at Picquet, the highest card of the suit led wins the trick.

If the elder hand has neither point nor anything else to reckon, he begins to count from the card he plays, which he continues till his adversary wins a trick, who then leads in his turn. He who wins the last trick counts two. When the tricks are equal neither party counts for them.

There are three chances in this game, viz., the *repique*, *pique*, and *capot*, all of which may be made in one deal. Thus, the eldest hand having the point, four *tierce*-majors, four aces, four kings, and four queens, he will make thirteen points, by playing the cards, and forty for the *capot*—which are reckoned in this way; first—

Point	Points.
Four tierce-majors	3
Four aces	12
Four kings	14
Four queens	14
By play	13
Capot	40

Total . 110

To pique your antagonist, you must be elder hand; for, if you are the younger hand, your adversary will reckon one for the first card he plays; and then your having counted twenty-nine in hand, even if you win the first trick, will not authorize you to count more than thirty.

Poker.—"Poker" is a game played in many ways, and in America it is said that it is not the same in any two States, but the following rules are generally accepted. The principles of play consist in betting even stakes against your opponents having a com-

ination of cards superior to that which you hold. These combinations are calculated in regard to their rarity, and in the following order. A hand consists of five cards:—

1. "A straight flush," which is a sequence of five cards of the same suit. It is a "royal" if headed by the ace.
2. "Fours," four cards of the same value, e.g. four kings.
3. "A Full," i.e. three cards of the same value, e.g. three sixes, and a pair, e.g., two twos.
4. "A Flush," which is five cards of one suit.
5. "A Straight," which is five cards in sequence, but not all of the same suit.
6. "Threes," which is three cards of the same value, e.g., three Queens, with two odd cards.
7. "Two Pairs" with an odd card.
8. "A Pair" with three odd cards.
9. "The Highest Card." Where above combinations are not out, the hand containing the highest card, or cards, is the winner.

As between pairs and sequences, that containing the highest cards has the preference.

The Ace may be treated as a high or low card and form a sequence with King, Queen and Jack, or a sequence with the one, two and three.

In the event of an equality in pairs, the hand containing the highest odd card wins. Equal sequences divide the pool, and so with equal pair hands.

"Poker" can be played by any number of players, but four, five or six is the usual number. The cards are dealt out, one at a time, until each has five. The hand next to the dealer puts one counter or any number of counters up to the limit, which has been fixed, into the pool. This is called the "Anté." The hand next in order may now look at his cards and decide either to drop out of the game or remain in (in which event he puts into the pool twice the number of counters as the hand before him; or he may double it). The same course is now gone through by the other players. When the eldest hand has seen his hand, and he is the last to do so, he may retire, or again increase the pool. Then the drawing of extra cards is allowed. Each player may draw from the pack

any number up to five extra cards, but in exchange for these, he must discard before drawing the number he wishes to draw.

As this is a game of bluff, as well as of skill, it is not usual to discard the full number of weak cards at the first time round, as the principal object is to impress one's opponents that one has a good hand. So the game goes on, with increasing stakes until perhaps only two are left in. It is possible that one player will bluff the other player out of it, in which event the cards are not shown and the winner takes the pool, but if the cards are exposed, the winner is determined by the value of his hand as given in the above table. A good Poker player seldom bluffs.

The above is what is known as "Draw Poker," the principal game that is played. In "Straight Poker" there is no filling up of the hands. In "Stud Poker" four of the cards are dealt face upwards, and the betting goes on on the strength of the value of the concealed card. When the players decide to see their cards, they are turned up, and the strongest hand takes the pool.

Pope Joan.—Pope Joan, like Matrimony, is a game at which a number of persons may play. It is one of the best of the round or social games, and is seldom played without a board divided into compartments; though, of course, a sheet of paper marked out in squares would do as well.

The first step in the game is to prepare the pack of cards, which is done by rejecting the eight of diamonds. The deal is then settled by cutting or dealing the cards for the first knave, etc. The dealer then shuffles the cards, and his left-hand neighbour cuts them. The dealer next goes through the ceremony of what is called dressing the board. This he does by placing counters in their proper compartments. It must be premised that the game is generally played for counters obtained previously to the commencement of the game.

The board is dressed in the following manner:—The dealer places one counter each to Ace, King, Queen, Knave, and Game; two to Matrimony, two

to Intrigue, and six to the Nine of Diamonds—the Pope.

This dressing is, in some companies, at the expense of the dealer; though in others the players contribute each two stakes.

The cards are next to be dealt round equally to every player, one turned up for trump, and about six or eight left in the stock to form stops; as, for example, if the ten of spades be turned up, the nine consequently becomes a stop; the four kings and the seven of diamonds are always fixed stops, and the dealer is the only person permitted, in the course of the game, to refer occasionally to the stock for information what other cards are stops, in their respective deals.

If either ace, king, queen, or knave happen to be the turned-up trump, the dealer may take whatever is deposited on that head; but when Pope be turned up, the dealer is entitled both to that and the game, besides a counter for every card dealt to each player.

Unless the game be determined by Pope being turned up, the eldest hand begins by playing out as many cards as possible; first the stops, then Pope, if he have it, and afterwards the lowest card of his longest suit, particularly an ace, for that can never be led through; the other players follow when they can in sequence of the same suit, till a stop occurs, and the party having the stop thereby becomes eldest hand, and is to lead accordingly; and so on, until some person part with all his cards, by which he wins the pool (game), and becomes entitled besides to a counter for every card not played by the others, except from the one holding Pope, which excuses him from paying; but, if Pope has been played, then the party having held it is not excused.

King and queen form what is called Matrimony; queen and knave intrigue when in the same hand, but neither these, nor ace, king, queen, knave or Pope entitle the holder to the stakes deposited in the named compartment of the board, unless played out; and no claim can be allowed after the board is dressed for the succeeding deal; but, in all such cases, the stakes are to remain for the next game.

This lively game requires some attention to recollect what stops have been made in the course of the play; as, for instance, if a player begin by laying down the eight of clubs, then the seven in another hand forms a stop; whenever that suit be led from any lower card, or the holder, when eldest, may safely lay it down, in order to clear his hand.

Quinze.—This game is similar in its character to VINGT-UN. It is so called from fifteen being the game, which is played as follows:—

The cards must be shuffled by the two players, and, when they have cut for deal, which falls to the lot of him who cuts the lowest, the dealer has the liberty at this, as well as all other games, to shuffle them again.

When this is done, the adversary cuts them; after which the dealer gives one card to his opponent, and one to himself.

Should the dealer's adversary not approve of his card, he is entitled to have as many cards given to him, one after the other, as will make fifteen, or come nearest to that number—which are usually given from the top of the pack; for example, if he should have a deuce and draw a five, which amounts to seven, he goes on drawing, in expectation of coming nearer to fifteen. If he draw an eight, which will make just fifteen, he, as being closest hand, is sure of winning the game. But if he overdraw himself, and make more than fifteen, he loses, unless the dealer should happen to do the same, which circumstance constitutes a drawn game; and the stakes are consequently doubled. In this manner they persevere, until one of them has won the game, by standing and being nearest to fifteen.

At the end of each game, the cards are packed and shuffled, and the players again cut for deal.

The advantage is invariably on the side of the elder hand.

Any number of players can join in this game.

Quinze is a very fashionable game in France. Anybody may learn all its mysteries in an hour.

Another way of playing Vingt-un and Quinze is as follows:—

Each player whose cards are under 21 (or 15) pays one counter or stake into the pool; those who overdraw pay two; and they whose cards make exactly 21 (or 15) pay nothing. The pool thus accumulates, till a natural (21) or Quinze (15) occurs, when the holder takes the pool and becomes dealer.

Snip-Snap-Snore.—This is a very laughable game, and is extremely simple. It may be played by any number of players, with a complete pack of cards. Each places before him *five* counters as his stock, and all the cards are dealt out in the usual order. The game consists in playing a card of equal value with the person immediately before you, which *snips* him; if the player next to you has a third card of the same value, you are snapped; and the fourth produces a snore. For example, if the elder hand A plays a six, and B likewise plays a six, A is *snipped*, and puts *one* into the pool. If C has also a six, B is *snapped*, and pays *two* into the pool; and if D has the other six, C is *snored*, and pays in *three*. The fourth, of course, is safe, because all the four sixes are now played. No person can play out of his turn; but every one must *snip* or *snap* when it is in his power. When any one has paid into the pool his five counters he retires from the game; and the pool becomes the property of the person whose stock holds out longest.

Solo Whist.—This game may be described as a combination of whist and nap, and is played by four persons. The cards count in value as at ordinary whist, but there are no honours in the game.

At the commencement of the game, the cards are shuffled, and a cut is made to decide who shall deal. The dealer then deals the cards out, three at a time, until he has four left in his hand, when he deals one to each person, and reverses the last card on the table. The suit of that card is trumps, and the card must remain on the table until the first hand has been played. Some players cut for trumps in a separate pack of cards. Each player in this game plays independently except in the case of "proposition and acceptance," which

will be described later. The hand on the left of the dealer has the first option of "calling." He may call or pass, and the option then goes to the next hand, and so on. If the four hands pass, the cards are collected together, reshuffled and dealt out by the person on the left of the dealer.

The calls are as follows:—The caller may call "Solo," in which event he has to make five tricks with the three other players playing against him. He may call "Misère," in which event he must lose every trick. He may call "Abundance," in which event he must capture nine tricks. In "Misère" there are no trumps. With "Abundance" he can ignore the trump on the table, and make whichever suit he likes trumps. He will of course be guided by the strength of his own hand. These are the single calls, and a caller, if he can only see his way to make four tricks, may "Propose," in which event one of the other players has the option of "accepting." The player who accepts should be in position to make four tricks himself, and the two play in partnership, eight tricks acquired jointly by the two players being necessary to make a "Proposition and Acceptance." In the case of a "Proposition and Acceptance," the proposer can be accepted by any of the three hands in due sequence round to and including the hand next to the dealer only. For example, in the event of the player on the right hand side of the dealer proposing, the dealer or the player on his left only would have the chance of acceptance, but in the event of the player on the left of the dealer proposing, the other three players would in turn have a chance to accept.

All the calls may be over-called, i.e., a "Proposition" may be overcalled by a "Solo" which precedes it, a "Solo" may be overcalled by a "Misère," and a "Misère" may be overcalled by an "Abundance," and "Abundance" may be overcalled by "An Abundance in Trumps" or by a "Misère Ouverte" (with which call the player has to lose every trick, and, after the first hand has been played, exposes his cards upon the table), and "An Abundance in Trumps" or "A

Misère Ouverte " may be overcalled by "An Abundance Déclarée," in which the player has to capture every one of the thirteen tricks.

Play proceeds as at ordinary "Whist." The player on the left of the dealer leads off and the other three players play in sequence. The trick is captured by the highest card played (or trumped) and the winner of the trick leads off for the next trick.

In the event of no one accepting a "Proposition," the proposer has the option of considering whether he will not make a single call, e.g. "Solo."

Speculation.—Speculation is a game at which any number of persons may play, with a complete pack of cards. The cards bear the same value as at Whist, and the stakes are made with counters, on which such a value is fixed, or not, as the company may agree. The highest trump in each deal wins the pool, and whenever it happens that not one is dealt, then the company pool again, and the event is decided by the succeeding coup. After determining the deal, etc., the dealer pools six counters, and every other player four; then three cards are given to each by one at a time, and another turned up for trump; the cards are not to be looked at except in this manner—the eldest hand shows the uppermost card, which, if a trump, the company may speculate on or bid for; the highest bidder buying and paying for it, provided the price offered be approved of by the seller. After this is settled, if the first card does not prove a trump, then the next eldest hand is to show the uppermost card, and so on, the company speculating as they please, till all are discovered; when the possessor of the highest trump, whether by purchase or otherwise, gains the pool.

To play at speculation well, recollection is requisite of what superior cards of that particular suit have appeared in the preceding deals, and calculating the probability of the trump offered proving the highest in the deal then undetermined.

The holder of the trump card, whether acquired by play or purchase, has a right to conceal the rest of his cards till the other players have shown their

cards in turn, or until he sells his trump, when his own hand is to be exposed in the same way as the rest.

Whoever looks at his cards out of turn can be compelled to turn them face upwards for the inspection of the whole company.

Thirty-One.—Thirty-one is an agreeable game, played with a perfect pack of cards, by any number of persons under fifteen. Each player puts an equal stake into the pool. Three cards are dealt to each, and a spare hand in the middle of the table, which is turned up.

The object of the game is to get 31, or as near it as possible, reckoning as follows: The ace stands for 11, each of the honours for 10, and the other cards for the number of spots on them respectively; thus ace, king, and 6 of any one suit reckon 27; ace, with two honours or one honour and the ten, for 31; an honour, a ten, and a five, for 25; and so on, but observe that all the three cards must be of one suit; and three cards of equal value, as three kings, tens, fives, twos, or aces are better than 30, but inferior to 31.

Each player in turn, beginning at the elder hand, exchanges one of his cards for one out of the spare hand; and this goes on till some one has got 31, or stops changing. When any one gets game, or 31, he shows his hand, and takes the pool, which finishes the game. If one stops without being 31, the other players can change once more only, or till it comes to the turn of the person who stopped, and then all show their hands, and he who is nearest to 31 gets the pool. In the event of two or more being equal, the elder hand has the preference: three aces, kings, etc., rank preferably to three queens, or lower cards.

Another mode is as follows:—Instead of depositing a stake, each player has two or three counters; and when all stop, the person who is lowest puts one of his counters into the pool; and he who has one or two left, after all the other players have paid in their three, is winner, and takes the whole. When two or more happen to be equally low, they each pay a counter.

Vingt-Un.—For a round game at Christmas—or, indeed, any other

period of the year when family gatherings take place—there are none more pleasant and harmless than Vingt-un.

The lively game of Vingt-un (Twenty-one) may be played by two or more players; and, as the deal is advantageous, and often continues long with the same person, it is usual to determine it at the commencement by turning up the first knave, the first ace, or any other mode that may be agreed upon.

The cards must all be dealt out in succession, unless a *natural Vingt-un* occurs; and, in the meantime, the pone, or youngest hand, should collect those which have been played, and shuffle them together, ready for the dealer, against the period when he shall have distributed the whole pack.

The dealer is first to give two cards, by one at a time, to each player, including himself. Each player looks at his card, and places his stake on the back; then the dealer asks each person in rotation, beginning with the eldest hand on the left, whether he stands or chooses another card, which, if required, must be given from off the top of the pack, and afterwards another, or more, if desired, till the points of the additional card or cards, added to those dealt, exceed or make twenty-one exactly, or such a number less than twenty-one, as may be judged proper to stand upon; but when the points exceed twenty-one, then the cards of that player are to be thrown up, and the stakes immediately paid to the dealer, who also is in turn entitled to draw additional cards; and, on taking a Vingt-un, is to receive double stakes from all who stand the game, except such other players likewise having twenty-one, from whom the dealer receives a single stakes, as for a tie; and when any adversary has a Vingt-un, and the dealer not, then the opponent, so having twenty-one, wins double stakes from him. In other cases, except a natural Vingt-un happen, the dealer pays single stakes to all whose numbers under twenty-one are higher than his own, and receives from those who have lower numbers than his own. The dealer also wins all ties. When the dealer draws more than twenty-one, he pays single stakes to all who have not thrown up.

Twenty-one, whensoever dealt in the first instance, is styled a *natural Vingt-un*, should be declared immediately, and entitles the possessor to the deal, besides double stakes from the dealer. In the case of more than one natural Vingt-un, they all receive double from the dealer, and the elder hand takes the deal.

• *Observe*.—An ace is reckoned either as eleven or one; every court card is counted as ten, and the rest of the pack according to their pips.

Whist.—The game of Whist is played by four persons with a full pack of fifty-two cards. The four persons are divided into partners—two and two. This division is usually settled at the commencement of the sitting by cutting or drawing the cards, the two highest playing the two lowest. The partners sit opposite each other on either side of the table and cut for deal, the player cutting the lowest card deals; but it is usual in modern play to give the deal to the lowest card shown in cutting for partners.

Previously to the cards being dealt the pack is shuffled or “made” by the elder hand and cut by the younger; the undermost card in the pack thus shuffled and cut being the trump. The pack is then dealt out card by card to each player, beginning with the left, the *elder hand*, till the whole are distributed. The last card, the *trump*, is then thrown on the table, face upwards, and so remains till the first trick is turned, when it is taken by the dealer and added to his hand.

The cards being dealt, each player takes up his thirteen cards and arranges them into suits; that is to say, places each kind of card with its fellows—the hearts, diamonds, spades, and clubs by themselves—so that they may be readily selected when required. The *elder hand*—the player on the left of the dealer be it remembered—now *leads* or plays a card, his left-hand neighbour follows, then his partner, and lastly his right-hand adversary. The highest card in the suit, or a trump, wins the *trick*, which is then taken up and placed by itself. The winner of the trick then plays another card, and so the game proceeds till the whole thirteen tricks are played, and the hand is finished.

The cards are then again shuffled and cut, and the second deal commences, the player on the left of the last dealer taking the deal, and his left-hand player becoming the *elder hand*. In this way the deal goes round till the game is completed. It is usual for each player to take the deal in turn, though in some companies they cut for deal at commencement of every game.

The value or rank of the cards in whist is as follows: the *ace* is the highest card in each suit, then the king, queen, knave, ten, and so on down to the two (*deuce* or *deux*) which is the lowest.

It is usual for the partner of the player who wins the first trick to take it up and keep the score; and, for convenience sake, he commonly keeps the score throughout the sitting.

The game is reckoned thus: in Long Whist, each trick *above six* reckons *one point towards the game*, which consists of *ten tricks*. In Short Whist the game is won when either party obtains five points, and in this game honours do not count.

The way in which the tricks are won must now be attended to. Each player *must* follow suit, *if he can*, or he subjects himself to the penalty of a *revoke*. But if he be not able to follow suit, he may play a *trump*, and so win the trick, or throw away any small card of another suit, which is called *renouncing*.

The ace, king, queen, and knave of trumps are called honours, and they reckon each a point towards the game, independent of the tricks. Thus: the partners holding between them *three honours*, score *two* to their game; if they hold the whole *four* of course they score them; but if each player holds *one* honour only, or if each side hold *two* honours each, no score can be counted, and honours are said to be *divided*.

Ten tricks are game, as already explained. But if either party score *nine* tricks they are not allowed to count honours, even though they may hold the whole four. The side holding *eight* tricks has the privilege of what is known as *the call*; that is, the player having two honours may—when it comes to his turn to play and not before

—ask his partner, "Can you one?" or, "Have you an honour?" If he has, he assents, and the three honours are shown, and the game won. Of course the player at eight points may show the three honours in his hand, if he has them. At *nine* points honours do not count; at *eight*, honours, if shown, count before tricks; but at *seven* or *six* tricks count before honours.

The games are usually reckoned among whist-players in this way: a *single* game is won by one point or more points against a less number; a *double* is won by either side scoring ten points before their adversaries have scored *five*; and a *triple* or *lurch* (seldom played nowadays) is when either side scores ten points to *love* or nothing.

A rubber is the best two games of three.

Points of a rubber. A *single*, one point; a *double*, two points; and the *rub*, two points. Thus it will be seen that in playing for points, it is possible for either side to win *five* points—one for the single, two for the double, and two for the rub. When triplets are allowed *eight* points may be gained in a single rubber.

When the whole thirteen tricks have been gained in one hand it is called a *slam*. In some companies the *slam* is equivalent to a full rubber.

The points of the game are usually marked on the table with four counters.

EXPLANATION OF TERMS USED IN WHIST.—*Shuffling*.—Mixing the cards; this is done previous to every new deal.

Cutting.—One player lifts a few cards from the pack and places them on the table: the lower heap is then placed on the top. In cutting for partners or deal, each party lifts a few cards and shows the undermost one of his lot. To save trouble, it is common either to deal a card to each player, or to throw the pack on the table, face downwards, and let each player select one.

Dealing.—Distributing the cards face downwards.

Elder Hand.—The person who leads. At starting, the player to the left of the dealer.

Trick.—The four cards played in a single round.

Trump.—The last card dealt, and

which always belongs to the dealer. All the cards of this suit are then trumps for that round.

Revoking.—Trumping, by mistake or design, when you can follow suit. The penalty for a *revoke* is the loss of three tricks, which may be claimed at any time during the deal, but not afterwards.

Finessing.—Endeavouring to gain an advantage by concealing your hand. Thus, a third player possessing the *best*, and the *third-best* card of a suit led, plays the latter, and risks his adversary having the second best. If the last player does not win the trick, the third player, sure of making his best card, wins a trick.

Points.—The number of tricks that constitute the game or rubber.

Sequence.—Three or more cards in consecutive order or value—as ace, king, queen, knave; seven, eight, nine, ten, etc.

Slam.—Winning every trick in the round.

Trumping Suit is when the player, having no card of the suit led, plays a trump.

Underplay.—Playing a deceptive game. For instance, the elder hand playing a small card when he holds the best in the suit.

We have now fairly given the alphabet of the game. Let the novice make himself fully acquainted with it, and in a little while he will be able to take a hand at Whist.

MAXIMS FOR WHIST PLAYERS.—The following maxims for Whist may be easily committed to memory:—

Lead from your strong suit, and be cautious how you change suits, and keep a commanding card to bring it in again.

Lead through the strong suit and up to the weak; but not in trumps, unless very strong in them.

Lead the highest of a sequence; but if you have *quarte* or *cinque* to a king, lead the lowest.

Lead through an honour, particularly if the game be much against you.

Lead your best trumps, if your adversaries be eight and you have no honour; but not if you have four trumps, unless you have a sequence.

Lead a trump, if you have four or

five, or a strong hand; not, if weak.

Having ace, king, and two or three small cards, lead ace or king, if weak in trumps; but a small one if strong in them.

If you have the last trump, with some winning cards and one losing card only, lead the losing card.

Return your partner's lead, not your adversary's; and if you have only three in the suit, play the best; but you need not return it immediately, when you win with the king, queen, or knave, and have only small ones, or when you hold a good sequence, have a strong suit or have five trumps.

Do not lead from ace queen or ace knave.

Do not lead an ace unless you have a king.

Do not lead a thirteenth card unless trumps be out.

Do not trump a thirteenth card unless you be last player, or want the lead.

Keep a small card to return your partner's lead.

Be cautious in trumping a card when strong in trumps, particularly if you have a strong suit.

Having only a few small trumps, make them when you can.

If your partner refuse to trump a suit of which he knows you have not the best, lead your last trump.

When you hold all the remaining trumps, play one, and then try to put the lead in your partner's hand.

Remember how many of each suit are out, and what is the best card left in each hand.

Never force your partner if you are weak in trumps, unless you have a renounce, or want the odd trick.

When playing for the odd trick, be cautious of trumping out, especially if your partner be likely to trump a suit; and make all the tricks you can each, and avoid finessing.

If you take a trick and have a sequence, win it with the lowest.

Retain the turned-up card as long as you can.

Attend to the score; and keep your temper.

Whist, German.—This is played by two players with an ordinary pack of fifty-two cards, and generally the rules are much the same as at ordinary

whist. An ace is the highest card in the pack, king next, and then the queen, jack, ten down to the deuce follow in sequence of value.

The cards are first shuffled and each player "cuts" for deal. The lowest deals the cards one at a time, his opponent first, until each player has thirteen cards. The remaining twenty-six cards are "packed," face downwards, upon the table. The players now inspect and arrange their hands, and then the top card of the twenty-six on the table is turned face uppermost on the others. The non-dealer now plays for that card; for example, he plays a card that he thinks will take a trick, and his opponent follows suit, either playing a higher one, trumping it, or a lower one, just as he likes or the exigencies of the hand demand. The winner of the trick collects the two cards together, reverses them, lays them upon the table, and they count as a trick in the final score. He then takes from the pack the top faced card, and puts it into his own hand. The loser of the trick takes the second card, which he shows his opponent, and places it in his own hand. The next card on the pack is then turned face foremost, and that is played for by the winner of the last trick. This proceeding is gone through until the twenty-six cards have been picked up, and when they have each party will have thirteen cards in hand. The cards are then played out as at ordinary whist, the winner of a trick having to play first for the next trick. Trumps can be either cut for, or the card first turned up on the pack and played for may be trumps throughout the game.

All tricks over thirteen count one point each, and a game consists of five points. Honours are not counted.

The principal points in the game are carefully to remember the cards that have been played, those your adversary has picked up in the course of the game, and how many of a suit have been played.

Whist, Scottish, or Catch the Ten—This game, very popular north of the Tweed, is played by any number of persons from two to eight. The twos, threes, fours and fives are discarded

from the pack; and if necessary for an equal division one or two of the sixes. When the number of players are two, three, five, or seven, each plays on his own account; in other cases as partners.

When two persons play, three hands are dealt to each; the first two hands from the top of the pack, after it is shuffled and cut; then other two; and lastly the third two; the thirty-sixth card being turned up. The hands are played in the order in which they are dealt. In like manner, when three play, two hands are dealt for each and played in the same order.

If the party consists of four or six, two and two or three and three are partners; or if of eight, of four partnerships; the partners sitting opposite each other with an adversary between each two.

MODE OF PLAYING.—The cards being cut, are dealt by one or three at a time, and the last one turned up for trumps; they have the same value as at Whist, except in the trump suit. Forty-one is game, and the points are made by counting the cards in the tricks taken and the honours of trumps. Each card above the player's share in the tricks taken counts for one. Thus, if four are playing, each person's share of the 36 cards is 9. If two partners take eight tricks (4 multiplied by 8 are 32), they reckon 14 towards game, that being the number over their joint shares of twice 9 or 18. The knave of trumps is the best, and reckons for 11, ace next for 4, king for 3, queen for 2, and the ten for 10. They are not reckoned, as at whist, by the party to whom they are dealt, but to those who take them in the course of playing.

As the names implies, the grand object in this game is to *Catch the Ten* of trumps, or to prevent its being caught by the adversary. The only safe way of saving or *passing* the Ten is to play it in a round of trumps, when one of your partners has played the best trump; or if you happen to be the last player, and have none of the suit led, trump with your ten, if it will take the trick, or if your partner has already taken it. These are very favourable opportunities and do not

often occur, so that it is frequently necessary to run some risk to secure so important a card—as by trumping suit in a second round, though not last player—trusting to your partner's holding the best trump, etc. If you hold the knave and king or ace and king, and have the lead, play two rounds of trumps and you will have a chance of catching the Ten in the second round, or enabling your partner to pass it under cover of your best trump. But these rules must vary so considerably according to the greater or smaller number of the party playing, that it is almost impossible, without confusing the learner, to lay down particular rules for every case. A revoke is punished by the total loss of the game.

Catch the Ten requires almost as much attention and calculation as Whist, which it closely resembles. Though certainly an inferior game to Whist, it is full of amusement.

Whist, Three-handed.—This game of Whist for three players has of late been adopted in the clubs. The full pack of cards is dealt in the usual manner, in four hands. The player on the left of the dealer has the option of exchanging his own hand for the "miss;" if he refuses to exchange, the third player has the refusal of the extra hand; the dealer having the last choice. If neither player chooses to exchange, the "miss" remains on the table as an unknown hand. The player choosing the "miss" throws up his own cards, which must remain, face downwards, on the table, to be gathered up after the round for the next deal. The deal is determined by the lowest cut, and each player takes it in turn. In some companies they cut for deal at the commencement of each game. The game consists of fifteen points, all tricks counting after four. Every honour counts; not as in the regular game, but one point for each honour held.

Now, it would seem that little skill is required to play at this game, each player depending on his own hand. But the contrary is the case, for the elder hand, having the advantage of seeing two hands, can so regulate his mode of play as to render his chances

of the game greatly superior to that of the other players.

Another mode of playing Three-handed Whist is by rejecting the fourth hand altogether, and allowing it to remain unseen on the table. Of course in this game the best hand must win, and there is little scope for ability. The game is fifteen up; every trick, above four counting as one, and honours scoring each as one point.

A third plan of playing Three-handed Whist is to reject from the pack all the twos, threes, fours, and fives from each suit—or the twos, threes and fours, and one of the fives from the pack. The game is then played fifteen up; tricks beyond four count each a point; and honours count individually, as in the other three-handed games. Each player standing on his own chance, he makes the best he can out of his twelve cards. It is not so amusing a game as either of the others.

CHARADES AND PROVERBS.

The amusements which we have described in this section are now universally recognized among the most legitimate means of spending an evening agreeably. Charades in tableaux, to speak of them first, are acted, not spoken. The great rule to be observed in playing them is silence, nothing more than an exclamation being allowed. Both charades and proverbs in tableaux are sources of great amusement. The charade words must be divided into syllables, each one of which is represented in a tableau, and the whole word is given in a final tableau scene. Proverbs are given in one scene only. At the conclusion of the drama the guessing begins on the part of the audience. If they are successful they, in their turn, perform; if not, they remain as audience.

"PATCHWORK," for example, makes three pretty scenes. The first scene is—

Patch.—Two little girls, dressed in expensive costumes in the prevailing style, stand as if just meeting. They wear jaunty hats and gloves, and carry parasols. Both are laughing and pointing to a third little girl, who stands near them, hiding her face, as if ashamed,

Her dress is poor, calico sunbonnet, coarse boots, and upon a dress of some very light material is a large square patch of dark stuff.

Work.—A very pretty tableau can be made for this scene by representing several trades, each at a small bench or table. The costumes can be picturesque.

The blacksmith hammering a horse-shoe; the dairy-maid making butter; the cobbler mending a shoe; the milliner trimming a bonnet; the carpenter planing a board; the cook plucking a fowl. In short, as many figures as the size of the stage will admit, all busy at some work.

Patchwork.—The scene is a farm-kitchen, with several figures.* Centre of background is the mother rocking a baby; over the cradle is a patchwork quilt. The grandmother, in the foreground, is sewing upon a piece of patchwork, and at her feet a very little girl is putting two patches together, with a very big needle, very long stitches, and a face puckered up as if very intent upon the work.

Good words for charades in tableaux are the following :—

Band-age	Cribb-age
Book-worm	Purse-proud
Hand-some	Broom-stick
Peni-tent	In-fan-cy (sea)
Watch-man	Horn-pipe
Mad-cap	Bride-cake

Proverbs in tableaux resemble the charades of which we have just been speaking. They are intended to represent in scenes some popular proverbs, one scene for each, and must be guessed by the audience. Here is an example :

"A stitch in time saves nine." The scene is a boudoir with two young ladies in handsome walking dresses standing in the centre of the foreground. On a chair, to the left of the foreground, is a handsome dress with a great rent conspicuous upon it. A strip of black cambric with torn edges basted down is a perfect imitation of such a tear.

One of the young ladies holds up the overskirt of her dress and sews up a very tiny rent, whilst the other points to the torn dress on the chair as if quoting the proverb.

The following proverbs will be found

very suitable for constructing proverbs in tableaux :

A stitch in time saves nine.

Hunger is the best sauce.

Money makes the mare to go.

It never rains but it pours.

Killing two birds with one stone.

Out of the frying pan into the fire.

The more the merrier ; the fewer the better fare.

Charity begins at home.

Fine feathers make fine birds.

It's an ill wind that blows nobody good.

Take care of the pence, and the pounds will take care of themselves.

Too many cooks spoil the broth.

Proverbs Acted by Single Players sometimes afford a great deal of amusement. In this pastime each player must represent by dumb show a proverb, or well-known quotation or saying, in a sufficiently intelligible manner to enable, at least, one of the company to repeat it aloud. As, however, it has been sensibly remarked, the performance may sometimes happen to be too obscure for the highest capacity, a president should be elected—well up in the game—empowered to demand an explanation of the actor's intentions from himself when the riddle has been given up by the entire company, and to put it to the vote whether such explanation shall be admitted or not. In case of its being pronounced satisfactory, the audience pay forfeits for their stupidity in not finding out the proverb. In case of its rejection the performer pays one as the penalty for his inability to render himself intelligible.

PROVERB No. 1.—The performer takes something to represent a large stone and rolls it for a considerable distance. He then picks it up, looking at it as if expecting to find something on it, and appears disappointed. He rolls it again, picks it up again, and shows it to the company, appearing (by appropriate action) to think its nakedness a singular phenomenon. The explanation of this proverb is soon given : "A rolling stone gathers no moss."

PROVERB No. 2.—A gentleman tries to make himself up for the character of a male bird of the barn-door species as nearly as possible. He opens the performance by appearing to be at roost

with his head tucked under the side of his wing, and one leg in the air. Gradually he awakens and appears to be snuffing the morning air. He crows ; but not being thoroughly awake drops off again. He awakens a second time shaking his imaginary feathers and crowing prodigiously, as if it were really time to rouse himself. He becomes wide awake, and indicates as well as may be that he wants his breakfast. He seeks for it on the ground for some time, but without success. At length he sees something. He flaps his wings with delight, and stoops to pick the article up with his beak. He secures and swallows it with much gusto, and crows repeatedly by way of expressing delight and assisting digestion. *Explanation* : "It's the early bird that picks up the worm."

An Acted Charade is a little drawing-room drama, by the performance of which the players represent first the syllables, then the whole of the word. The parts may be represented by one connected story, or not, as the performers please ; or they may be distinct from one another, which is an easier and more common way of representing them. In playing charades you must make the most of everything you can lay hands on. Table-covers and coloured blankets do admirably as dresses for Indian chiefs ; large scarfs make excellent turbans ; ladies' shawls do for trains ; and with some white aprons and caps, the theatrical wardrobe is soon completed. You can manufacture Mont Blanc out of two chairs, a fishing-rod and a sheet ; an Irish car out of a couch judiciously draped, with a circular tea-tray to represent the wheel, and so with other things. A room with folding-doors is of course best for a stage ; but wanting this, an iron rod suspended across the end of the room on which a pair of curtains can be hung will answer the purpose. Impromptu charades are always the funniest.

To Make Charades Successful the following hints should be remembered and acted upon. Choose one person to organize and direct the band of actors. Let the choice fall on one who is quick to decide on the suitability of words and scenes. Let the scenes be of short

duration, and see that the conversation is kept up with spirit. If the number of actors will admit of having two parties, let them act alternately, for long pauses between the scenes weary the spectators. The more complete the transformations, the greater the fun.

The following, by the author of "A Trap to Catch a Sunbeam," will serve for illustration of the outlines of a charade :

The word is "RINGLET."—*Ring* might turn on the loss of this ornament, and the suspicion of theft against one of the servants, who is consequently discharged.

Let might be a house to let, where the discharged servant has found a situation. The old master and mistress take the apartments, and, on unpacking the portmanteau, the long-lost ring is found at the bottom of it. Of course, due reparation is made to the suspected servant, and she is taken back to her old service at increased wages. Making the part of the servant Irish would increase the fun.

THE WHOLE.—If the plot is still carried on, there might be a party at the same people's house ; the daughter is engaged to be married ; the gentleman is seated near her ; she suddenly becomes uneasy ; he questions her, but she declares there is nothing the matter ; suddenly a little girl, a younger sister, one of the *enfant terrible* kind, who has been very mischievous all the time, jumps up from under the table, holding aloft a false ringlet, the loss of which had caused the poor young lady's distress. General astonishment of the guests, and discomfiture of the young lady, would close this last scene.

The following is a short list of suitable charade words :—

Accent	Axe-sent
Accident	Axe-sigh-dent
Altar	Awl-tar
Announce	Ann-ounce
Artful	Art-full
Apex	Ape-x
Artless	Art-less
Assail	Ass-ale
Bagpipe	Bag-pipe
Bandage	Band-age
Bedlam	Bed-lamb
Behead	Bee-head

Blacksmith	Black-smith
Bulrush	Bull-rush
Carpet	Car-pet
Crossbow	Cross-beau
Cutlass	Cut-lass
Cashier	Cash-ear
Catastrophe	Cat-ass-trophe
Dolphin	Doll-fin
Donkey	Don-key
Footpad	Foot-pad
Flatten	Flat-ten
Hamlet	Ham-let
Handcuff	Hand-cuff
Hartshorn	Hearts-horn
Humdrum	Hum-drum
Idol	Eye-doll
Illbred	Ill-brod
Implore	Imp-lore
Invest	Inn-vest
Insight	Inn-sight
Loadstone	Load-stone
Messmate	Mess-mate
Mistake	Mis-take
Nightmare	Night-mare
Nightshade	Night-shade
Nosegay	Nose-gay
Outfit	Out-fit
Pilot	Pie-lot
Ringlet	Ring-let
Shamrock	Sham-rock
Toilet	Toy-let
Welcome	Well-come
Willful	Will-full
Yellow	Yel-low

We give here an example of an acting charade :—

BULL'S-EYE.

FIRST SYLLABLE—BULLS.

CHARACTERS.

TERENCE O'CONNOR. *A broth of a boy.*

MR. BLARNEY. *A fine ould Irish gentleman.*

NORAH. *His only daughter.*

COSTUMES.—*Terence* may wear a shabby tail-coat, knee-breeches (or rolled-up trousers), a high stand-up collar (cut out of paper), and a very battered hat. Old *Blarney* should be attired in a similar costume; his hair must be whitened by Time or the flower-dredger. *Norah* must dress in a very simple style.

Enter TERENCE.

TERENCE. Och! it's a sin and a shame to see a fine young man cut off in his prime, and made miserable for the rest of his life by a pair of iligant black eyes. Though it's my own tongue

that's to blame entirely, for if I'd kept it still I might have gone on talking to her till this present moment. I was in too great a hurry to pop the delicate question; for though we had known each other ever since we were babies in arms, it wasn't decent for me to try to strike up a match at our very first meeting. So when I said to her, "Norah, darlint, I mane to talk to Father Maguire to-morrow," she got into such a towering passion, that I was glad to get out of her sight. Since then I've never clapped eyes on her, though it's many a time I've peeped through the keyhole, and seen her looking so disconsolate, that I've felt terribly inclined to make it up with her. I know she's sorry she drove me away from her side at the very moment I was kneeling at her feet, and offering her my heart and hand, to say nothing of the pig and the field of praties. She must be the most miserable creature in the world; but what's her misery compared to mine? I can't even sleep a wink at night for dreaming of her; and though I've banished her from my thoughts entirely, I can think of nothing else. Bedad! here comes her ould father. I thought the family had gone to bed.

Enter BLARNEY.

BLARNEY. I'm sure I heard somebody. Who can it be at this time o' night?

TERENCE. Good - evening, Mister Blarney.

BLARNEY. Sure then I did hear somebody.

TERENCE. Your stupid ould ears have deceived you, Mister Blarney. There hasn't been a soul near the place, barring the pig.

BLARNEY. That's as fine a bull as I've heard for a long time. Sure, haven't you yourself been lurking about the premises?

TERENCE. Bedad! I clean forgot that. Maybe it was me that disturbed you?

BLARNEY. Maybe it was; and if it's not troubling you too much, Mister O'Connor, might I be so bould as to ask what brings you here so late?

TERENCE. Your daughter's to blame entirely. She refused to marry me;

and as I've made a vow never to speak another word to her, I thought I'd just come and say "farewell" before I started by the train for Ameriky.

BLARNEY. Ameriky! Why, the boy's mad! Norah, the darlint, will break her little heart.

TERENCE. Never fear that. If she'd a heart at all, she'd never have been hard-hearted enough to have broken mine.

BLARNEY. I'll call her out at once. I wouldn't have her lose your iligant pig and your beautiful crop of praties for the world.

TERENCE. That's foily said, Mr. Blarney. But, depend upon it, the girl won't listen to you.

BLARNEY. You're mistaken, entirely. If she was as deaf as a post she'd listen to her poor ould father. (Calling.) Here, Norah! Norah machree, come here this minute.

TERENCE. Stop a bit. I'll turn my back upon her, and listen to what she says. It's getting dark, and she won't know who I am.

BLARNEY. Oh, you're a clever boy.

Enter NORAH.

NORAH. Was it calling me you were, father dear? If it's supper you're wanting, it won't be ready for ten minutes at least.

BLARNEY. Bother the supper; I have got bad news for you, my jewel.

NORAH. Good gracious! Has anything happened to the pig.

BLARNEY. No; saints be praised, the pig is all right! But poor Terence O'Connor is going to Ameriky.

NORAH. Oh! don't say so, if you love me. (Crying.) What shall I do without the dear boy? And it's I that's driven him away. Oh, dear! oh, dear! (Puts apron to her eyes, walks across, and runs against TERENCE.) Holy Mother! who's that? Why, I declare it's Terence himself. Terence, darlint, you won't be leaving your own Norah?

TERENCE. It isn't me, machree, it's a gentleman from Dublin.

[BLARNEY bursts into a violent fit of laughter.

NORAH (Aside). It's Terence himself. There's not another boy in

Limerick that could make such a beautiful bull as that. I'll tease him a little. (Aloud to TERENCE.) If you please, Mister Gentleman from Dublin, was it you that brought the message from Terence?

TERENCE. It was, miss.

NORAH. And will you be seeing the poor boy again?

TERENCE. Yes, I intend calling upon him before he goes away.

NORAH. Then tell him, sir, that the young woman he's running away from forgives him, although he did steal her poor father's pig.

[BLARNEY tries to stifle his laughter.

TERENCE (Turning round). That's not true! Mister Blarney, I appeal to you. Did I ever carry off one of your family.

BLARNEY. You never did, sir. Saints forbid that I should suspect a gentleman from Dublin! It was the boy Terence that stole the hapless little animal.

TERENCE. I can't stand this any longer. Norah! Mister Blarney! do you want to drive me out of my senses? Are you playing the fool with me, or did I really steal a pig unbeknown to myself? It's Terence O'Connor that asks. (BLARNEY and NORAH laugh.) Oh! please don't laugh.

NORAH. Will you promise, then, never to get angry with your own Norah?

TERENCE. Yes, darlint.

NORAH. And that you'll never think of leaving ould Ireland again?

TERENCE. I'll promise anything that's rasonable, if you'll only promise to make ould Mister Blarney my mother-in-law.

BLARNEY. Terence, you're a broth of a boy, and I don't mind giving my consent to your marriage, providing Norah's agreeable.

TERENCE. Say the word, honey, and call me back from Ameriky.

NORAH. Get away with you, do.

TERENCE. Where to, darlint?

NORAH. To Father Maguire's if you please. (They embrace.)

BLARNEY. The boy's bulls will make his fortune yet. Come to supper, my darlint!

[Exeunt.

SECOND SYLLABLE.—EYE.

Characters.

MR. TESTY. *An irascible old gentleman.*

MR. RAPID. *A fast young gentleman.*

MRS. TESTY. *A sympathetic old lady.*

DORA. *A charming young lady.*

COSTUMES.—As the above characters are supposed to be gentlemen and ladies of the present period, there will be no difficulty in finding suitable dresses. RAPID ought to be attired in a smart morning suit. Should a juvenile performer take the part of MR. TESTY he will require a very high white cravat and a pair of spectacles, to make himself appear sufficiently venerable.

Enter RAPID with bandage over right eye.

RAPID (*talking very fast*). Treat, this! Fancy getting a black eye to-day, just as I am about to make the acquaintance of my beloved governor's old friend Testy and his niece, the lovely and accomplished Dora. How very provoking. Never had such a thing before, though I'm turned two-and-twenty. Let me see—22 by 365 gives something over 8,000. I've actually existed for 8,000 days, and never experienced till this morning the delights of a blackeye. Now, I don't object to black eyes as a rule, but I do object to having one to-day. It's some consolation that I got it while doing my duty as a defender of the rights of property. Coming up Regent Street I see a charming young lady looking in a bonnet-shop, while a repulsive young man is picking her pocket. I alarm the first and collar the second. The young lady faints and is carried into a shop by an elderly female. The young man shows fight, gives me a back-hander, which effectively closes my right eye and wakes the lion within me. I struggle with the pugnacious young man, and succeed in getting from him the purse of the sensitive young lady. The disappointed young man breaks away from me and rushes blindly into the arms of a vigilant policeman. I enter shop, throw myself at the feet of convalescent young lady, and restore to her the purse. Emotional elderly female weeps, embraces me, and thanks me in the name of her

niece, whose looks express intense gratitude. I rush out of shop, call a Hansom, drive to the nearest butcher, purchase half a pound of beef-steak, and clap it on my eye damaged by dishonest, but muscular young man. I then drive home, wash, dress and remove beef-steak. I turn out again, jump into another Hansom, and drive here to meet, according to appointment, the lovely and accomplished female whom my governor wants me to marry. He and old Testy have arranged everything: and if Dora likes me, and I like her, there will be nothing to prevent us entering into the blessed state of matrimony next week—nothing but this horrible black eye! I'm half afraid it will upset the pretty little scheme which has been concocted by the old gentleman. How can I hope to make a favourable impression on a simple-minded girl with this! (*Removes bandage and shows black eye.*) I wonder how it's getting on? I wish there was a looking-glass in the room. I must try to keep it covered, as I don't want to be taken for a prize-fighter.

Enter MRS. TESTY.

MRS. T. How do you do, Mr. Rapid? I have long looked forward to this meeting.

RAPID (*covering his black eye with pocket-handkerchief*). My dear madam, I am delighted to make your acquaintance.

[*Places his left hand over eye and gives her his right.*]

MRS. T. I saw your papa last week, and learnt from him that you were disposed to regard my niece with a favourable eye. (*Aside.*) I wonder why he keeps his handkerchief up.

RAPID. Oh yes! (*Aside.*) I should be sorry to let her see my unfavourable eye.

MRS. T. (*Aside.*) I declare he's weeping. His wicked father wishes him to contract a marriage that is repugnant to him. (*Aloud.*) Young man, look me in the face. You love another!

RAPID. You are quite mistaken, madam. My heart has never yet been wounded by the arrows of Master Cupid. (*Aside.*) What is the stupid old woman driving at?

MRS. T. Do not attempt to deceive me, young man. One blighted being can feel for another. I, who was driven by a father's threats to accept the hand of a gentleman that I didn't care two pins for, can understand those bitter tears that you try in vain to check! (*Weeps.*)

RAPID. Really, Mrs. Testy, I am at a loss to comprehend your meaning. My father never threatened me in his life.

MRS. T. You play your part well, young man. It is noble of you to attempt to screen your bad father; but, as I said before, you cannot deceive me. I will leave you to complete your self-sacrifice.

RAPID. You're very kind, I'm sure.

MRS. T. (*Gazing at him with an expression of pity.*) Poor young man! Allow me to embrace you.

[*Rushes into his arms, then bursts into a fit of crying, and Exit.*]

RAPID. What a remarkable old person! She seems to be somewhat mad. I hope Dora doesn't take after her. I wonder where I can have met her before; her face seems quite familiar to me. Oh for another slice of beef! How this troublesome eye of mine smarts.

Enter MR. TESTY on RAPID's left. I wonder whether I could find the cook.

TESTY (*In loud voice*). Good-morning, Master Reginald.

RAPID (*Startling*). Good gracious, how you made me jump!

TESTY. My name is Testy! (*Offers hand to RAPID, who in taking it exposes his black eye for a moment.*)

RAPID. I am proud to meet so old a friend of my father. (*Aside.*) I hope he didn't catch sight of the eye.

TESTY. You've commenced the battle early.

RAPID. Oh yes, exactly so. (*Aside.*) He must have seen it.

TESTY. Well, there's nothing like punctuality. Many a match has been spoiled for want of it.

RAPID. (*Aside.*) He evidently takes me for a prize-fighter.

TESTY. You have not seen Dora yet? Poor girl! her nerves received a dreadful shock this morning.

RAPID. I'm very sorry to hear

that. (*Aside.*) I wonder how they'll bear the second shock—the appearance of my right optic?

TESTY. I'd advise you to say nothing to her about the ring this morning.

RAPID. The ring! Oh, of course not. I should be sorry ever to allude to it in her presence.

TESTY. What, sir! Do you mean to tell me that you will never talk to her about the ring.

RAPID. Never, sir! I could not degrade myself so.

TESTY. Degrade yourself by marrying my niece! What do you mean, you scoundrel?

RAPID. •Now don't be cross. I never said a word about marriage, so it's evident we don't clearly understand each other.

TESTY. You said you would never speak to her about the ring!

RAPID. You mean the wedding-ring! (*Laughing.*) I declare I thought you were talking about the prize-ring.

TESTY. (*Haughtily.*) Sir, I have a horror of prize-fighting, and am not in the habit of talking about that ring with which you seem so familiar.

RAPID. Forgive me, sir. I did not intend to hurt your feelings.

TESTY. Well, then, shake hands. By the way, what's the matter with your eye?

RAPID. Nothing worth speaking of. Merely a slight discoloration of the surrounding parts. I think it advisable not to expose it. (*Drops handkerchief. TESTY seizes him by the shoulders.*)

TESTY. You call that a slight discoloration! I should very much like to know, sir, what you consider a black eye. How dare you come here, sir, with such an eye as that?

RAPID. Allow me to explain. This blackened optic is an honourable disfigurement. It was obtained in a good fight.

TESTY. I thought as much. You are a disgrace to your family.

RAPID. Sir, I did not come here to be insulted.

TESTY. No, sir; you came here to insult us.

RAPID. Do you take me for a prize-fighter?

TESTY. I do, sir; you carry the

badge of your calling upon your face.

RAPID. I will leave this house at once.

TESTY. My servants shall kick you out, sir.

Enter MRS. TESTY and DORA.

MRS. T. Good gracious! What is all this noise about? (*Sees RAPID's black eye, and screams.*) I declare my wicked husband has actually given that blighted being a black eye!

DORA. Oh, aunt! Why that's the brave young gentleman who restored my purse to me.

MRS. T. So it is. How foolish of me to forget him! Young man—dear Reginald, embrace me again! (*Rushes into his arms.*)

TESTY. What's the meaning of this, I should like to know? Perhaps you can tell me, Dora?

DORA. Oh, uncle dear! That's the gentleman who fought that horrible man in Regent Street this morning, and got back all my money. (*Aside.*) What a dear young man he is! That black eye which he got in defending me quite becomes him.

TESTY. Reginald, my boy, I have wronged you. My niece is yours. Take her—be happy. (*Weeps.*)

MRS. T. Ah, me! It's too late now to save the poor young man from his doom. (*Weeps.*)

DORA. Oh, Mr. Rapid, forgive my uncle; he is always in such a hurry! You can't know whether you like me yet!

TESTY. Nonsense! Of course he likes you. Don't be self-willed.

DORA. I'm sure I shall faint.

RAPID. Faint, darling Dora, by all means. This arm that was raised in your defence a few hours ago shall support you now. [*Exeunt.*]

THE WHOLE WORD.—BULL'S EYE.

Characters.

SMITH, BROWN, JONES, and ROBINSON, *Effective Members of the Puddlelock Volunteer Rifle Corps.*

SERGEANT BANG, Drill Instructor.

TOMKINS, a Recruit.

COSTUMES.—The uniform of the Puddlelock Corps may be got ready in a very short space of time. Any description of coat or jacket may be worn. The belts and gaiters are to

be formed of brown paper, and cocked hats of the same material may be substituted for caps. Tomkins will not wear the uniform of the corps.

Enter SERGEANT BANG, SMITH, BROWN, JONES, and ROBINSON, marching in single file.

• **BANG.** Halt! To the right face. Stand at ease! (*Volunteers go through the motions indicated by words of command.*) Attention! Privates Smith, Brown, Jones, and Robinson, you are to proceed at once to the practice-ground to shoot off the tie made by you for the Puddlelock Challenge Cup. You will fire one shot each at three hundred yards.

SMITH. The marker hasn't come yet, sergeant. I've sent Tomkins to look for him.

BANG. Oh, then, you'd better wait here till he comes. Stand at ease—stand easy a moment. [*Exit.*]

BROWN. I say, Smith, if you hadn't made me laugh I should have won the prize last night.

SMITH. My dear boy, I didn't make you laugh; it was Jones.

JONES. I merely called your attention to little Dobson's elegant position while firing at the long range from the knee. It was much better that you should lose the match than miss the chance of seeing Dobson in the regulation position.

BROWN. Poor little chap, he looked for all the world like one of those fat Chinese idols.

SMITH. I thought he'd never get up again.

BROWN. I shall win to-day, I'm confident.

SMITH. I'm not at all sure of that; something tells me that I shall come off the conqueror.

JONES. Now don't be too fast. I tell you beforehand I shall make a bull's-eye with my shot.

ROBINSON. I wish I was as certain of success as you all seem to be. (*All laugh.*)

SMITH. Poor fellow—did he want the Challenge Cup!

BROWN. Let me give you a bit of advice, Robinson. Shut your eye and press the trigger at the same time, and you'll perhaps have just such good

luck as you had last night. If you aim at the bull's-eye you are sure to lose.

ROBINSON. I mean to try my best for the prize, in spite of your chaff.

JONES. Fancy Robinson the champion shot of Puddlelock. Wouldn't he give himself airs!

ROBINSON. Not I! I shouldn't give myself half so many airs as some people I could mention do now.

Enter TOMKINS and SERGEANT BANG.

TOMKINS. The marker's come! And almost everybody belonging to Puddlelock waiting to see the sport. Oh, don't I wish I was an effective!

BANG. Squad: Attention!—Right about face—March!

[Exit SMITH, BROWN, JONES, and ROBINSON.]

Now, Mr. Tomkins, let me put you through your facings. Attention! Keep your head up, sir; shoulders square to the front; knees perfectly straight.

TOMKINS. Can't I go and see the shooting?

BANG. No talking, sir. Now, sir, attend to me. On the word "Face," place the hollow of the right foot smartly against the left heel, keeping the shoulders square to the front. On the word "Two," raise the toes, and turn a quarter circle to the right on both heels, which must be placed together. To the right. *(Tomkins draws back foot.)* As you were! Wait till the word "face" is given. To the right face! *(Tomkins draws back left foot.)* As you were! The left heel must never quit the ground. Pay attention, sir! To the right face! *(Tomkins executes the order correctly.)* Two! *(Tomkins tries to turn round to the left, and tumbles down.)* As you were! Don't you know your right from your left?

TOMKINS. Oh yes! I know, but I forget.

BANG. Must try to remember, sir. Here come the competitors. I wonder who's the winner?

Enter SMITH, BROWN, JONES, and ROBINSON.

TOMKINS. What news, Brown?

BROWN. Bad news, I'll read you

the score. *(Reads paper.)* "Robinson, three; Jones, one; Smith, none; Brown, none."

TOMKINS. What, is old Robinson first?

SMITH. Yes, by accident.

BROWN. Jones made me laugh again.

JONES. Serve you right, for nudging my elbow.

ROBINSON. I don't care for your chaff now. I've got the cup, and mean to keep it. *(Dances about.)*

BANG. Private Robinson, you are an honour to the corps; shake hands.

TOMKINS. Shake hands with me, too, there's a good fellow. Though I'm only a recruit, I can respect the man who makes three points with one shot.

BANG. Squad, fall in! Attention! Right face. Quick march!

[All march out, TOMKINS not in step]

ENTERTAINING TRICKS

To Force a Card.—The trick must be performed in such a way that the selector thinks he has really chosen the card himself. The card to be forced should be placed at the bottom of the pack, the pack held in the right hand, and half of it taken off and held in the left hand. The hands are then held side by side, a few cards from underneath either set are fanned between the hands, and the second finger of one hand kept upon the card that is to be forced, i.e. the bottom one. A circular movement is then made and continued with the hands, and the cards that have been fanned in the centre are made to revolve over one another at the same time. This last action is done with the forefingers and thumbs. The whole of the cards, except that to be taken, should be held tightly when the card is about to be picked, and the attention of the person who is taking the card should be distracted as much as possible by some bantering or humorous remark. Then as the fingers of the selector approach the cards, the centre where the forced card is, is brought to his fingers, and the card thrust into them. Do not look at the cards but at the selector's hand when placing the card into it. Where more than one card is to be forced, all the forcing cards must be kept at the bottom of those in the right hand,

It sometimes happens that the performer runs up against some one who will not take a forced card, and in that event it is well to let him take another. After another person has been induced to take the forced card, ask for the wrong card, have it returned to the middle of the pack, make the pass which is described later, and show the card on the top of the pack.

To Palm a Card.—This can be more easily learnt by a study of Conjuring illustration than from any description. The card is first held between the first finger and thumb as in Fig. 1; with the forefinger slide the card into the palm of the hand (Fig. 2), cover the card with the fingers as in Figs. 3 and 7, and the back of the hand can be displayed. Those who cannot cover the card with the hand will find it advisable when the position as in Fig. 3 has been attained almost to close the hand, at the same time folding the card, and retaining it held by the thumb in the palm.

The Single-Handed Pass.—The effect of this trick is to pass the cards in the top half of the pack to the bottom, i.e. so that a card that may have been placed on the top of the pack by a member of the company will be immediately found in the centre. The cards are first held between the thumb and the second, third and fourth fingers, the first finger being held just underneath the cards. Half of the pack is then dropped into the palm of the hand, the forefinger pushes up the bottom half, and with the thumb and fingers the cards are packed together again.

To Read a Pack of Cards.—The effect of this trick on the audience is as follows:—A pack of cards is shuffled by one of the audience, handed to the performer, who holds the pack in front of him and shows the front card to the audience. He then puts the cards behind his back, thinks deeply, and then names the next card. He brings the pack in front of him again, and shows the card that he named as the front one. He then goes through the whole pack in the same manner.

It is done in this manner:—A card is retained in the trousers pocket, from whence it is secured and palmed, and

when the pack is returned, the palmed card is placed face foremost on the top of the pack, i.e. the reverse way to the others. The pack is then held on a level with the elbows, and the performer can of course see the bottom card of the pack. After noting it, and taking care that the audience does not see him looking at it, he passes his hands behind his back, and puts it over the card the audience have seen at the other side of the pack. After thinking for a moment or two, he tells them what the next card will be, brings the pack from behind his back, and shows the card in the front. He now notes the next card, and repeats the experiment. It is well not to go right through the pack.

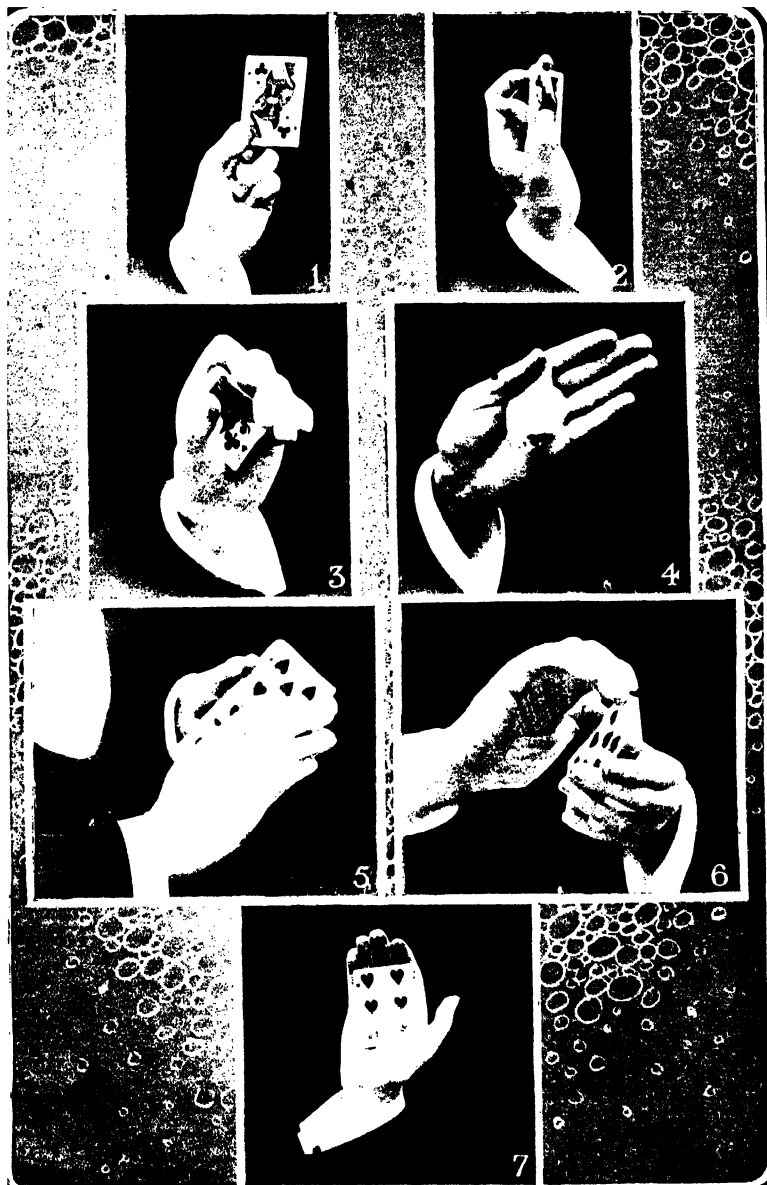
To Balance Coins.—Lay three pennies edge to edge in a row in the left hand, and upon them place the wood that has been concealed in the palm of the right hand. Grip the ends of the stick between the thumb and second finger of the right hand, at the same time holding the top and bottom coins tightly. The coins can then be raised perpendicularly, and shown as if self-supported upon their own edges.

To Hold a Penny so that a Strong Man cannot take it from the Fingers.—This trick is only suitable for a very tall person, or at any rate should be played with a person much shorter than the performer. A challenge is put forth that a penny held between the fingers cannot be taken away by another party without his touching the person holding the penny. The penny is shown held in the ordinary way, but immediately the challenge is accepted, the hand is held high above the head. If the opponent jumps in the air, or stands upon a chair, the coin should be held away so that it cannot be reached.

To Hang a Hat on the Panel of a Door.—This is a very effective trick on entering a drawing-room. The performer, with hand covered by his hat, rubs a pencil sharply down the side of the door. The pencil will adhere to it, and a hat with a flat brim can be hung upon the pencil. Don't spoil the paint on a friend's best door, however.

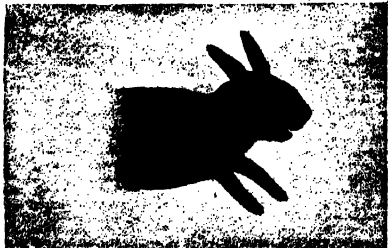
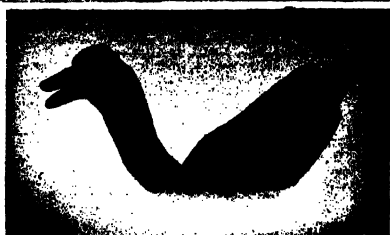
Two Corks.—A cork is held in each hand between the thumb and first finger, close to the palm. The trick

CONJURING.



Palming. Figs. 1-4 and 7. Single hand.—Figs. 5 and 6. Two handed.

SHADOWGRAPHY.



is to remove with the first finger and thumb of the right hand the cork that is held in the left hand, while at the same time holding the cork in the right with the first finger and thumb of the other hand. The forefinger and thumb of one hand are inserted inside the loop made by the other. See illustration.

A Novelty.—Undertake to show something that has never been seen before, and which, after all have seen it, will never be seen again.

This is done by cracking a nut, exhibiting the kernel, and then eating it.

A Glass of Water that must be Spilled.—Fill the glass, and lay a piece of thin card or paper over the top, dexterously turn the glass upside down, and place it upon the table, which must be level, then draw away the paper or card, leaving the water in the glass. It will be impossible to remove the glass from the table without spilling the water. Do not perform this in a drawing-room.

The Mysterious Paper Bands.—Procure three strips of paper, each 2 or 3 feet in length by 1 inch in width, paste, and a pair of scissors. Paste the ends of the first strip of paper together. Twist the second strip of paper once, and paste the ends of that together. Twist the third strip of paper twice, and paste the ends of that together also; i.e. make three paper loops. Exhibit the first loop, and remark that the obvious effect if you cut it in half, stripwise, will be to make two loops. The loops should then be cut. Now pick up the second loop and remark that you are going to do the same with this loop. Cut the loop of paper, and a loop twice the size will be produced. Now pick up the third loop, and cut that in the same manner, and two loops, one inside the other, will be produced. In the case of the loop with the double twist, it will require a little dexterity to keep this twist masked, especially when cutting the paper.

To Lift a Man with Five Fingers.—Two persons put their index fingers under the insteps of the person who is to be lifted, two others place a finger under each elbow, and a fifth puts his forefinger under the chin of the subject.

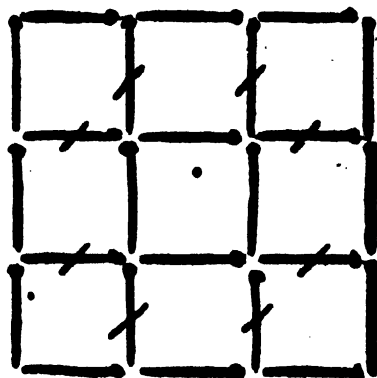
At a given signal each person lifts his hand, and the person is raised up. The result may seem very surprising, but it is only a question of the equal subdivision of weight. The average human being weighs about 11 stone, so that each finger has only to sustain about 30 lbs. weight, which is not difficult.

To Project a Draughtsman from a Column.—This experiment is performed by means of draughts or backgammon "men." Build up a column of ten or twelve pieces, stand it upon the table, and with the thumb and forefinger propel, or shoot, a single disc along the table violently against the pile. The piece thus launched will strike the pile tangentially in one of two ways—either it will hit it at the point of contact of two discs, in which case two men will be projected from the column, or it will strike a single disc, in which case one piece only will be projected. The stability of the other pieces will not be disturbed.

MATCH TRICKS.

No. 1.—Lay twenty-four matches on a table to form nine squares. Take away eight matches and leave two squares only.

Make the nine squares in the following manner:—



Now take away the eight matches marked with a cross; two squares only remain, one in the centre of the other.

No. 2.—Take twenty-four matches and form a square of eight piles, each

containing three matches, so that each side of the square contains nine. Add one, then three, and afterwards four matches in such a way that in each case there are still only nine matches in each side and at top and bottom.

It is accomplished in the following manner :—

FIG. 1

III	III	III
III		III
III	III	III

Take a match from the top left-hand corner, and add it to the three in the centre of the top row, now add an extra match to the three in the centre of the left-hand row. *

FIG.

II	III	III
* IIII		III
III		III

Now take one match from the top-right-hand corner and add it to the pile in the centre of the top row, take one from the left-hand bottom corner, and add it to the pile just above it, and one from the right hand bottom corner to the pile above that also. Add three extra matches, to make each centre pile consist of five, and each corner two.

FIG. 3

II	IIIII	II
IIIII		IIIII
II	IIIII	II

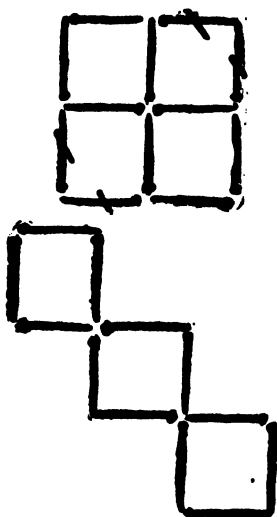
Take one match from each corner and add it to the centre piles in the top and bottom rows. Then add an extra match to each of the centre piles.

FIG. 4

I	IIIIII	I
IIIIII		IIIIII
I	IIIIII	I

The sides of the square contain nine in each case.

No. 3.—Lay twelve matches to form four equal squares (see following diagram), and then remove and replace four matches so as to make only three squares of the same size as the others. It is accomplished in the manner depicted in the second diagram.



SHADOWGRAPHY.

This very old entertainment is not often introduced into drawing-rooms nowadays, but it always affords considerable amusement to the little ones. To become expert in the art considerable time must be spent in practice, in order to make the fingers pliant, and to learn how properly to secure the best positions. A few good ones are shown in our illustration, and a little experience with these will soon enable the performer to invent many other equally good ones—especially if he uses a few cardboard figures, which may be easily made. A candle will supply quite sufficient lighting power in a small room, and the hands should be held about two feet away from the candle, and about four feet away from the screen, which should be tightly stretched on a wooden frame. The performer will do well to work with the screen supported on the edge of a table, and he can then rest his scenery and arms on the table if necessary, though very often the scenery is fixed in the sides of the frame. Considerable fun may be got out of shadowgraphy by introducing sham fights, etc.; and one should remember that elderly folk are only grown-up children, and that this entertainment is just as likely to appeal

to an audience of adults as to one of children.

SECOND SIGHT.

This very popular form of entertainment has had many exponents from Irving Bishop to the Zancigs, and its successful exhibition depends entirely upon the assistant having a very good memory. The usual method of performing it is for one of the exponents to be blindfolded, and to remain upon the stage, while the other moves among the audience, borrowing for a moment watches, knives, coins, cheques, railway tickets, etc. The latter then asks the blindfolded assistant some such question as, "What is this?" and the assistant tells the name of the article, its value (in the case of a coin or cheque), the number or date it bears, etc. The whole feat is worked by an elaborate system of codes. Usually the first letter of a word or sentence is the index. By way of example we will simply assume that the following is the code for numbers:—

A = 0	S = 5
M = 1	T = 6
N = 2	U = 7
P = 3	W = 8
R = 4	Y = 9

The number on a railway ticket is, we will say, 3526. The examiner would ask, "Please Say the Number on This?" That is only a simple illustration, given for the purpose of explaining the principle.

In the early stages it may be helpful to have a code and use sentences of which only the first letter of each is to be noted, e.g. suppose the name wanted is "Alfred King." The questioner would say:—

- A. Are you able to tell me this name?
- L. Let us hear.
- F. Find it quick.
- R. Really!
- E. Expedite yourself.
- D. Do.
- K. Kindly hurry.
- I. If you please.
- N. No?
- G. Get on, do.

But this is so obvious that it is advisable to code the letters, e.g.:—

A = H	H = O	O = V	V = C
B = I	I = P	P = W	W = D
C = J	J = O	Q = X	X = E
D = K	K = R	R = Y	Y = F
E = L	L = S	S = Z	Z = G
F = M	M = T	T = A	
G = N	N = U	U = B	

and then the name given would be coded something like the following:—

- A = H. Here, tell me this name.
- L = S. Say it quickly.
- F = M. Make haste.
- R = Y. You ought to be able to.
- E = L. Look sharp.
- D = K. Kindly.
- K = R. Run on with the surname.
- I = P. Please.
- N = U. 'Urry.
- G = N. Now.

In an advanced code a much more complex arrangement would be used, and below are given a few general codes, which, if perfectly committed to memory, and the performer moving amongst the audience possesses the ability readily to construct sentences on given lines, should enable a successful and mystifying performance to be given. It is well to employ the phonetic system entirely, and though to one unacquainted with it, it is apt to be a little puzzling at first, practice soon makes perfect, and it is surprising how it simplifies the questions and prevents them from being made too obvious and long. For example, again assume the code is the first letter of each word, and take the word PENNY (phonetically PENI). The assistant would be asked some such question as, "Please Explain the Nature and Intrinsic worth of this." Often some words that have nothing to do with the code will have to be worked into the sentence in order to make it natural, and one way to escape misleading the assistant is to drop the voice slightly when uttering such words and just as slightly to emphasize the code words, or vice versa, or the superfluous words may even be slightly slurred.

The following is a natural code for numbers:—

- | | |
|------------------|------------------|
| 1. Please. | 6. Now or quick. |
| 2. Say. | 7. Tell or take. |
| 3. What or that. | 8. Me or my. |
| 4. This. | 9. Here or in. |
| 5. Is or on. | 0. Us. |

For single numbers the sentences might be something like the following, "Number, please?" "Say number"; "What number?" "Number on this?" "Number, quick?" "Give me the number"; "The number here?" etc.

Some combinations on this code would read awkwardly perhaps, but a ready wit will soon put that right. For example, 9753 the sentence, "Here tell (or take) is (or on) that (or what)," may be made, "Here, tell the number on that."

For articles ordinarily given up for examination the following code will be useful:—

What is this?	Watch.
Now this?	Knife.
Please say this.	Pocket-book.
Sharp!	Scissors.
Call this.	Chain.
Quickly these.	Keys.
Tell me.	Photograph of a lady.
Tell quickly.	Photograph of a gentleman.
Here, here.	Halfpenny.
Here?	Penny.
And here?	Sixpence.
Here what?	Shilling.
Here this?	Two shillings.
Here, tell this.	Half-crown.
Here now.	Half-sovereign.
Here say.	Sovereign.
Can you tell this?	Cheque.
Say this.	Cigar.
Say now.	Cigarette.
Please this.	Pipe.
Quickly.	Ring.
Well, this.	Visiting card.
This, please.	Purse.
And this.	Handbag.
And this, please.	Programme.
Reply this.	Railway ticket.
Guess this.	English coin.
What here?	French coin.
What this?	American coin.
What have I?	German coin.

In the code for the valuation of a foreign coin a sentence in which the first letter of each word spells the value may be added. The date on coins and cheques can be arrived at by the numerical code already given. It is often well to have a signal as to whether it is the numerical or alphabetical code that is being used, and a little

cough may serve as an indicator. Sometimes one question allows of two or three others that have been explained by the first. For example, supposing a photograph has been handed up. The remark was, "Tell me," showing it was the photograph of a lady. The blindfolded assistant might reply, "A photograph," and the performer would say: "And of what?" to elicit the reply, "A Lady."

Wearing apparel is often described, and the principal code needed is in regard to the colour of the articles.

First to denote whether:—

I am touching? A lady.
Whom am I touching? A gentleman.

Here is a—?	A boy.
And here is—?	A girl.
Say the colour—?	Black.
What is the colour?	Blue.
And the colour?	Green.
The colour?	Yellow.
Now the colour?	Red.
Yes, the colour?	Grey.
Tell the colour.	White.
What colour?	Brown.
Colour, please?	Pink.
Colour?	Tartan.

Playing cards can be easily told:—

For the suits:—

What suit?	Clubs.
The suit?	Spades.
Which suit?	Diamonds.
Suit?	Hearts.

Use the numerical code for numbers of the cards, and for the court cards:—

Value?	King.
What value?	Queen.
The value?	Knave.

We have here given only a few codes, but the possibilities can be easily conceived. The performers should constantly rehearse until perfect, and the one moving amongst the audience should be of ready wit and quick observation, capable of meeting such a contingency as having an article given to him that is not in his regular code, or one which he cannot quickly code. Then he may ask something in relation to the article. For example, supposing a theatre pass were handed to him, and it could not be easily coded, he would perhaps simply ask, "What name is on this?" and then code it.

GARDENING

Arrangement.—It is comparatively useless to say what shape a garden should be. In the majority of cases, circumstances decide that. A few words on the arrangement of the garden, however, may not be useless, as this is generally open to choice, save in the case of an old garden where alteration would mean loss.

Front gardens, small or large, are generally devoted to lawn, ornamental shrubs and trees, and flower borders. Where space is limited, the design should be simple, for intricate plans only involve labour, which does not gain a proper recompense. The walks should be curved rather than angular, the beds circular or oval, and the space for flowers as open as possible.

The Scotch fir, sycamore, and mountain ash, for dry sandy soil; the deodar, yew, Corsican and Chili (monkey puzzle) pines for light soils; the larch for moist soils; the lime for heavy; horse-chestnut, laburnum, hawthorn, and lilac for good loam soil, are among the favourite fast-growing ornamental trees; while the holly, laurel, arbutus, rhododendron, azalea and flowering currants, are useful and attractive shrubs. No edgings are so neat and pleasing as those of well-trimmed dwarf box, though ornamental tiles are clean, and harbour no insects. For climbers, there are the rose, honeysuckle, common and Chinese jasmine, clematis, virginia creeper, ivy, passion-flower, and vine.

In planting the flower borders, the objects aimed at should be threefold; succession of bloom, effective contrast, and gradation of height. Though a mass of blossom has undoubtedly a fine effect, the gardener should beware of covering all his available space with

any one or two of such orders as sweet peas, carnations, pansies, daisies, tulips, etc.; for as soon as the period of flowering is over, the garden, popularly speaking, is "done for" for a time. Tulips, of course, may be replaced by geraniums, calceolarias, etc., but sufficient time must be allowed for the dying down of leaves and stalk, for the bulbs are seriously injured, if not spoilt, by lifting them too soon. The gaiety of the scene may be preserved from February to November by sowing thinly a mixture of the seeds of plants which flower at different periods of the year, selected from any good seedsman's list. When putting in the hardy herbaceous plants, due regard to height, and, if possible, contrast of colour, should be observed. Pansies, daisies, primroses, forget-me-nots, etc., being dwarf, should be put in front; pinks, cloves, carnations, calceolarias, veronicas, verbenas, marguerites, and geraniums next, and phloxes, chrysanthemums, starworts, spring-flowering bulbs, gladiolus and lilies, should be placed at the back. Red daisies should alternate with white, scarlet geraniums with yellow calceolarias or marguerites, and so on.

Standard roses look well when encircled with tulips, hyacinths, pansies, daisies, etc. For a shady border, few plants look better than the hardy ferns, to be bought for about a shilling a dozen.

Generally speaking, it is pleasantest to have flowers or grass nearest the house in the back garden also, with the kitchen garden beyond, though when this cannot be obtained, a barrier of sweet peas is by no means to be despised.

For a small back garden, a single

central path is sufficient, running the whole length, and terminating in an arbour formed of the common white clematis or the white or yellow jasmine, which are of dense growth and very cheap. A three-foot gravelled path would be ample, and the edges might be of wood, tile, grass, runnerless strawberry, dwarf box, thrift, or white alyssum. Between the plots, 12-inch alleys trodden hard with the foot and turned over every spring, are all that is necessary.

In a shady corner there should be a rockery formed of old bricks, clinkers, or large stones, with a covering of soil, for hardy ferns.

A space should be devoted to horse-radish, herbs, and rhubarb; shady for the two first, open for the last.

Potatoes, Jerusalem artichokes, the cabbage tribe, lettuce, peas, beans, marrows, onions, shallots, carrots, parsnips, beetroots, turnips, radishes, mustard and cress, celery, and spinach, are all comparatively easy of culture; while for fruit, a bed of strawberries, and a few bush trees and dwarf fruit trees, properly tended, will furnish a varied supply, and their low initial cost comes within the means of almost every one.

The fruit bushes should be placed against a wall with a south exposure, and below them the strawberry bed, or four-foot beds for early seeds, may be made.

Espalier-trained apple trees may be bought in the late autumn for about two shillings each. These planted along the path and fastened to stout stakes, with a young well-pruned standard pear or cherry tree at intervals, keep very little light from the lower crops, and prove welcome additions to the garden.

A row of scarlet runners and gooseberry or currant bushes may be planted next to the fence or wall.

Tools.—The subject of tools well deserves some consideration. Effective and extensive gardening has been often carried on by the aid of no more than an ordinary digging fork and a hoe, but the accumulated experience of gardeners is in favour of using the implements specially designed for the different kinds of work

that gardening entails. These tools are—

1. The pick-axe, with one end pointed for loosening the surface of hard soil, and the other end axe-shaped, for cutting through roots.

2. Draining spades, strongly-made implements with long, narrow, slightly curved blades sloping towards a point.

The ordinary digging spade, an oblong blade of plate iron, steel-tipped, with a D-shaped wooden handle and shaft. It is made in sizes, 1, 2, 3, and

4. Number 2 is most suitable for a man of ordinary strength, and number 3 for a more robust gardener. Number 4 should be left for professionals, as the amount of soil lifted by it renders gardening an arduous task. The spade is most suitable for working light soils. It is also necessary for removing plants or soil.

The fork is of three kinds: digging, potato, and garden. The first has three, four, or five square-pointed prongs or "tines." A four-tined digging fork is the favourite, as its use produces a fine surface on the soil. The use of the potato fork is indicated by its name. It has broad, flat tines, the outer ones spreading at the points, so as to lift a large number of tubers. This is a capital implement for working heavy, gravelly soil, as the tines slip past the stones which would stop a spade, and being broad, lift the soil well. Garden forks are small implements with three short broad prongs, and are used for weeding flower-beds and for transplanting. The border or lady's fork is a slighter form of the digging-fork, and is specially adapted for stirring the surface mound of flower borders. The cheaper ones are generally unsatisfactory. Forks materially lighten the work of digging heavy ground, but care must be taken that the tines are not bent in usage, for a prong out of line is liable to be snapped off short.

5. The rake is too well-known to need description. The iron teeth are usually set in the horizontal bar about one inch apart, and number from 4 to 14; a 10-inch rake is a serviceable size. The handle should be of stiff ash. The rake is necessary to break up the surface of the soil while crops are in, to bring it to some degree of uniformity

of size and level, to clear it of stones and other litter, and to draw the earth over seed that has been newly sown, either in drills or in patches.

6. Hoes are roughly divided into "draw" and "thrust." The draw hoe is chiefly used for stocking, hilling, or banking up—that is, drawing the earth around the roots and stems of growing plants, for loosening the soil amid crops, and for destroying weeds. The common hoe, an oblong blade with a stiff ash handle, for work among potatoes; the long neck hoe with a straight-edged semi-circular blade and a long, flexible handle for light work among carrots, parsnips, etc.; and the Bury or swan-necked hoe, a long, narrow blade with a bent neck, for cutting up weeds, are the chief divisions of the draw hoe. The thrust, Dutch, or scuffle hoe, consisting of a sharp narrow blade connecting the ends of a rounded metal fork, is best adapted for weeding purposes.

7. The dibble is generally made of the handle of an old spade, sharpened to a point. Its use is to make holes in the soil for the reception of the roots of growing plants during transplanting.

Besides the above-mentioned, a wheelbarrow, a Sussex trug, a ladder for use among fruit trees and climbers, a trowel, a watering-pot, and a stick or reel and lines for keeping rows straight, are all useful in the garden, while a lawn mower is indispensable if there is any grass to be kept in order.

THE KITCHEN GARDEN

Preparation of the Soil.—Whatever the original state of the soil of the garden, it admits of being brought to a state of great fertility. By draining, trenching, manuring and mixing, a barren sterile piece of ground can be converted into a luxuriant, fruitful garden. When in good condition, the soil of a first-rate garden is deep, rich, and moderately light. To produce this result, which should be the aim of every gardener, the ground, if wet, must first be drained. Ascertain whether the water can be carried. Open a trench along the whole breadth of the plot, either into the intended outlet or into a well sunk in the ground, and into this

trench lead the several drains from the higher part of the ground from one end of the garden to the outlet, gradually sloping towards the lower trench. If this be left open and kept clear, it will carry off all superfluous water; but if some brushwood is laid along the bottom, it may be covered and cropped over. Brickbats or stones will do for the courses, but pipes or tiles are to be preferred. A good plan is to sink a large petroleum barrel for the reception of the water, fixing up a small pump, when a supply of capital water for the garden is assured.

Next in importance to drainage is the introduction of fresh air into the soil, whereby nutritious gases are assimilated, and the food is made ready for the hungry plants. This is effected by the process of trenching; that is, removing the soil to the depth of two or three spades or "spits," and filling the space with the unbroken clods from the next rows, piling them lightly up in parallel ridges. Trenching is good for all soils, especially those that it is sought to bring for the first time into a condition suitable for growing crops, and for old gardens, fresh and unexhausted soil being thereby brought to the surface. The immediate object is to deepen the surface mould, and prepare the subsoil for nourishing the fibres of deep-rooting plants.

By ridging, or throwing the ground into a succession of ridges and trenches, as in planting leeks or celery, a larger extent of surface is exposed to the action of the frost in winter, and the air and frost are better able to find their way into and through the ridges of earth, which, consisting as they do of lumps of earth more or less broken in themselves and lightly piled together, so to speak, are more readily permeated by the atmosphere, or aerated, enabling the oxygen of the air, and its other constituents, to make fresh chemical combinations with the mineral atoms of the soil. In this lies the philosophy of digging, trenching, and ridging; and it is obvious that this should be done from November to January inclusive, when nature is dormant. By this we do not mean that ground should not be dug over at any other time of the year. To grow good crops of certain

vegetables it is necessary to turn the ground over at least a month before they are put in, and thus render it lighter and looser for the reception either of the seed or growing plants.

Soil that is stiff should have plentiful additions of sand or road grit—a cartload or two of road sweepings can be bought from the local Boards for a mere trifle—and vegetable manure: well-rotted leaves and garden refuse. Sandy and gravelly soils are improved by the addition of clay, silt from ditches and bottoms of ponds, or by trenching with thick turf from a pasture, when possible. At the same time it should be remembered that gravelly soil produces splendid potatoes in a moist district, or during a "dripping" season.

Having trenched the ground in November to the depth of 18 or 24 inches, spread over it a liberal dressing of stable manure and a little lime, and leave it to the action of the weather. Then, in February, when the operations of

Digging and levelling usually begin, the soil will be found to pulverize freely. Take out a trench about 9 inches deep and 5 or 6 inches wide, and remove the contents to the end of the ground under hand. Now begin at the end of the trench, take out a spadeful from the next row, lift it, and turn it over into the trench, bottom uppermost, burying the manure and weeds. Thoroughly pulverize the clods as you proceed, keeping the surface level. This process should be continued until the whole piece has been dug over, when the last trench taken out is filled with the mould from the first. The fork or spade should penetrate to a uniform depth, and the furrow should be kept as straight as possible. When manuring during digging, the manure should be thrown along the bottom of the trench, and the earth placed on the top of it. Dry weather is best for digging, as wet soil is heavy and will not pulverize properly.

Manuring.—This is a subject of very great importance, to which too little heed is generally given. Although soil which has been left fallow and unused for a number of years will require no enrichment the first year, beyond perhaps a little lime, yet no garden can

produce crops year after year without becoming impoverished and starved unless compensation be made in the shape of regular and generous manuring, any more than a man can work without being fed. There is no falser economy than trying to screw successive crops from the land without giving anything in return. At the same time, care must be taken that the garden is not overloaded with rich food, and especially that the manure is well rotted, otherwise multitudes of insects are bred, and club and canker prevail among the crops.

Every garden should have its compost heap—that is, dung and refuse preparing for use. This should be formed of alternative layers of stable manure or horse-droppings, and burnt rubbish, turf-parings, the cleanings of the fowl-house or rabbit-hutch, soot, wood-ashes, leaves or earth, etc., with a paillul or two of house slops—which are rich in alkaline matters—occasionally poured over, and the whole turned now and then until everything is well decomposed. A dressing of this dug into the garden every spring will keep the soil in good heart.

Beside the compost heap, sand is a highly useful and necessary restorative of the soil, to which too little attention is given. We say *necessary*, because silica or sand is an important constituent of nearly every plant, and every crop carries away with it a portion of the silica lodged in the soil in which it is grown, thus rendering a fresh supply absolutely imperative. Lime, too, is one of the most important manures that we possess, and sweetens, quickens, and enriches the soil in which it is incorporated.

It is not possible to lay down any precise rule for the application of lime as a manure, and the quantity to be used must depend chiefly on the soil itself and its special character. When ground is first taken into cultivation it may be applied in considerable quantities, but on land that has been already utilized for the production of crops it must not be used so freely. On clay lands a plentiful admixture is beneficial, and on soils on which much vegetable matter is dug in, it is equally serviceable. On light lands it must be used

but moderately, and even then it is better to mix it with soil, turf in course of disintegration, etc., so as to form a compost. The effect of lime is not immediately apparent, but shows itself the second or even third year after application. This, of course, does not apply to its use for the destruction of worms, slugs, grubs, etc., which promptly feel and acknowledge the application of caustic lime and lime just slaked. Stiff and heavy lands are lightened and mellowed by its presence, and the crops that are yielded by land judiciously limed are heavier, better, and earlier than those which it produced before liming.

Soot in small quantities, carbon manure, fish potash manure, and Canary Guano, are among the best known fancy fertilizers, the latter being specially useful as a top dressing for flower gardens.

The simple operations of trenching, digging and manuring, are considered as accomplished in all that follows.

Rotation of Crops.—There is one cardinal rule that the gardener must ever bear in mind, and that is, in no case should ground be devoted to the growth of one kind of vegetable two consecutive years; that is to say, peas must not be succeeded by peas, or even by beans, and ground on which cabbages have been grown must not be appropriated to cabbages even of another sort, but a proper system of rotation observed. Gardeners who overlook this, and repeatedly sow or plant the same kind of vegetables in the same spots, are soon aware of their error by the diminution of the produce, both in quantity and quality, and by the various diseases as well as insect pests which attack the plants, however abundant may be the food supplied to them, or however careful the tillage.

The following rotation of crops is very easily followed, and has been strongly recommended. It applies to a rood of land, and supposes the breadth to be $27\frac{1}{2}$ yards, and the length 44 yards, which makes just one rood; but if the garden is half the size, half the quantity advised for the rood should be planted. Of this piece of land make three equal divisions, and crop as follows:—

First Division.—Time of planting: First week in March. Nature of crops: 22 rows of potatoes, 2 feet between each row; sets to be 1 foot apart in planting. An alley of one foot between this and the next division.

Second Division.—Time of planting: Early in March, 2 rows of Windsor beans, 4 rows of hollow-crowned parsnips; end of February, 4 rows of Altringham carrots, 6 rows of onions, Globe or James's keeping; end of March, 1 row of Windsor beans; early in May, 4 rows of turnips, 2 rows of beetroot, 1 row of scarlet runners. With a foot alley between each sort.

Third Division.—Last week in February, 2 rows of ash-leaved kidney potatoes, 3 rows of Queen cabbage, or Express cabbage; early in March, 1 row of marrowfat peas, 3 rows of ash-leaved kidneys (Cape broccoli after); last week in February, 6 rows of ash-leaved kidneys (celery after), 1 row of early long-pod beans, 1 row of early peas (celery after); end of March, 1 row of cauliflowers (stone turnips after); plant as early as possible, 2 rows of lettuce (autumn cabbages after). With a foot alley between each sort.

First Division.—Potatoes. Note that winter and spring broccoli, and winter cabbage and spinach, take this division directly the potatoes are off.

Second Division.—Root Crop. Note that this division is to be trenched for the main crop of potatoes for the next year directly the roots are off.

Third Division.—Mixed or early crop. Note that this division is to be occupied with snatch crops, such as turnips and lettuces, etc., in the autumn, and to be sown with the usual root crops next spring.

There will be but little, if any, difficulty in following the rotation and sequence of crops as given. It will be seen at once that the principle lies in dividing the ground into three crops, which arrangement provides that in each division two years must elapse before it is again cropped in the same manner.

List of Vegetables.—It will be useful to append here a necessarily brief list of vegetables that are suited for the

cottage garden. It might be easily extended, but the varieties named will be found sufficient for all practical purposes.

Artichokes, early, medium, late peas, beans, onions, leeks, spinach, shallots, beetroots, French beans, cress, runner beans, cabbage, Brussels sprouts, broccoli, savoy, potatoes, vegetable marrows, kale, cucumbers (*for outdoors*), cauliflower, lettuce, parsnips, carrots, turnips, tomato, radishes, rhubarb, celery, endive, parsley, corn salad.

The gardener should consult one of the well-known seedmen's catalogues in regard to the best varieties. Some of the sorts are, however, mentioned in the following pages.

Sowing.—Most vegetables are raised from seed, sown at certain seasons of the year, for which see under the various headings. To save seeds is a work of some trouble, causes a great waste of ground, and exhaustion of soil. Good seeds can be purchased from reliable seedsmen at very reasonable rates, the best growers publishing price lists in which the special novelties and varieties of the season will also be found. In sowing, it may be laid down as a general rule that the seed should not be buried below the surface at a depth greater than their own thickness, except in the case of peas and beans. These should be set a depth of two or three inches in a trench made with the blade of a hoe or back of a rake, gently pressed in, and covered. Such seeds as onions, carrots, parsnips, etc., should be sown in very shallow drills made in the earth with the end or back of the rake, and have the ridge that is thus thrown up drawn over them. Other seeds should be strewn on the flattened surfaces prepared for them, lightly covered with sifted soil, and gently patted with the back of the spade. ~~The sower~~ After the seed, the finer should be the soil in which it is grown. This should be dry enough to crumble lightly when worked with the hand, therefore dry weather should be chosen for seed sowing, if possible just before a shower; if no rain falls immediately after the sowing, a good watering should be given through a fine rose. After this the watering

should be slight until the soil upheaves and the tiny plant appears. Water may then be given more freely, every morning or every evening if the ground seems dry. This is a matter which must be rigidly attended to, for the omission of a single watering overnight when the young plants are in a parched state, may eventually lead to the loss of the whole. It is advisable to sow rather thickly, but as soon as the plants are a couple of inches high they should be thinned out. The vacant ground between the rows must always be kept well hoed and weeded. When transplanting, the greatest care must be taken that the tap-root and rootlets are not broken. Then having smoothed the ground with the rake, and well watered it, make holes with the dibble, insert the plant as far as the collar, and press the earth firmly round the roots and collar. When planting two or more rows the first plant of the second row should be placed between and behind the first two of the front row, and so on, one planting thus shading another as little as possible.

SIMPLE DIRECTIONS FOR THE CULTIVATION OF FAMILIAR VEGETABLES

Potatoes.—The potato has the place of honour in most kitchen gardens, and shall be treated of first here.

A deep, well-drained, light sandy loam is the best soil for potatoes, though there are varieties suitable for almost any sort of land, and the seedsmen should be informed of the nature of the soil the tubers are intended for. Land that has not been tilled for a number of years requires no manuring, but when a garden is old or poor a little stable manure, cow-dung, or charred vegetable refuse may be dug in with advantage, or laid in the bottom of the trenches.

Potatoes are of two distinct kinds—early and late. Early potatoes germinate and ripen quickly, but as they do not keep well, no more should be grown than will suffice until the main crops are ready. The Ashleaved Kidney is the chief of early potatoes. Late potatoes and the intermediate kinds ripen in autumn, and are used

through winter and spring. The York Regent, Beauty of Hebron, and Magnum Bonum are among the chief favourites.

The usual method of cultivating the potato is by planting the tubers (called "sets," and sold at from 1s. 3d. to 2s. 6d. per peck, according to variety), whole, or in pieces, each piece having a couple of well-defined "eyes." If the sets have begun to shoot before planting, so much the better. If the soil is light or dry, the tubers, either entire or in pieces, as may be preferred, may be dibbled in; that is, a line is stretched where the row is to be placed, on one side of which holes, 8 inches deep and 15 inches apart are made, the potato dropped in, and the hole filled up by pressing with the dibbler. Where the ground is heavy, a good plan is to cut a trench 6 or 8 inches deep, in which the sets are placed 15 inches apart, and then covered up with the earth. The trenches should be about 2 feet apart. Trenching and dibbling are matters of locality largely, one method being used in one neighbourhood and another in the next, but the dibbler should never be used on clay soil, for the hole made simply forms a basin in which the potato stands and rots.

As soon as the shoots are 3 or 4 inches above the surface, the soil should be "stocked"—that is, stirred deeply with a well-wielded hoe—or lightly dug with the fork, between the rows, and when they have grown 8 or 10 inches high, a little earth should be drawn up to them with the hoe, just sufficient to cover any tubers that may grow near the surface; but too much earthing up produces luxuriance of growth in the haulm, and is contrary to nature. The ground should be thoroughly drained. It is generally admitted that disease is most prevalent in wet soils or wet seasons. Some recommend cutting off the haulm as soon as the blight appears: this may save them in a great measure from the rot, but stops the growth of the tubers, and whether any real advantage is derived from it is doubtful. It is advisable to pick off all the flowers, unless seed is wanted, as this will throw the strength of the plant into the process of forming tubers. Constantly stirring the soil

and earthing up is the grand secret of successful potato culture.

For early crops, plant as early in January as the ground can be found in fair working condition. A small breadth of the ashleaved kidney should be planted on a south border, or in the warmest and most sheltered situation at command, to furnish an early supply. In planting, let the ground be neatly levelled, then, beginning at one side, dig it over about 6 inches deep, and put in the sets in the openings at proper distances, which must be regulated by the growth of the variety. The lines for the early kinds, as ashleaved, etc., which form but small tops, may be about 20 inches apart, leaving about 9 inches between the sets. The sets should be covered about 6 inches, leaving the soil over them as open and loose as possible. On strong, heavy land the ashleaved and other weakly growers should not be covered more than 4 inches. The soil should be kept ridged up round the shoots as soon as they appear above the ground, keeping them covered until they are 4 to 6 inches high and all danger of frost is past. Watering the young potatoes before the sun rises, so as to wash the frost off, is said to save them from frost burn.

The main crop should be got in late in March, or early in April. (When the ground is very cold, however, from the effects of heavy snow and long-continued frost, it is by no means an advantage to get the tubers in very early.) As the ground is likely to be dry at this time, they are better dibbled in whole than cut, as the young plant thus has a supply of food until it is strong enough to draw it from the soil. Watering is unnecessary save in very dry weather.

Cabbage.—The *brassicæ*, or cabbages, are a very important product of the garden. They are ~~also~~ except under a well-considered system of rotation cropping, more exhausting to the soil than any other vegetables.

The principal cabbages now cultivated in this country are the early Battersea, early dwarf, early York, Enfield market, sugar loaf, drumhead, red Dutch, savoy, green savoy, yellow savoy, Brussels sprouts, borecole,

curly, kale, broccoli, and cauliflower. They are all propagated by seed sown for main crops thrice a year, namely, in April for summer use; in June and July for autumn and winter use; and in August and September for spring use; but it is usual to make sowings of smaller quantities for several months in succession.

The seed is sown on beds of fine rich soil, 4 feet wide, and long in proportion to requirements. A bed four feet by twenty feet will take 2 ounces of seed. Let the seed-beds be open, and away from trees and other shelter, and tolerably dry. Sow the seed broadcast over the ground, or in drills 1 inch deep, made with a hoe; sow them rather thickly, for the excess can be pulled out, while a thin crop might be entirely lost. Cover the seed with fine soil, tread it well in, unless the ground is wet and binding; in that case stand in the alleys, rake level, and pat the surface with a piece of flat board; this will press the seed in without hardening the ground. If dry enough to tread, rake the surface even. If the weather is dry, and continues so, it will be necessary to give the seed-bed a copious watering to keep it moist, so that the surface does not cake. When the seed is up, keep the beds moist, so as to promote vigorous growth, giving a liberal dusting of lime, salt, or soot, now and then, which will benefit the young plants, and prevent the attacks of the fly. When large enough to handle, that is, when they begin to produce their true leaves, thin them to an inch apart. When the leaves are about four inches long, draw the plants and prick out, some in their permanent homes, and some to gain additional strength in nursery beds, 5 or 6 inches apart from each other. This will insure strong stocky plants, and will also induce the formation of extra quantity of ~~seed~~ ^{leaves}. In transplanting the early varieties, great care must be used not to injure the roots, and the plants should be freely supplied with water until fairly established.

In final planting out, the ground being trenched and well manured, a drill is drawn 3 inches deep, at a distance proportioned to the size and habit of growth of the variety; the small or

early dwarfs at 12 or 15 inches apart in the rows, the larger sorts at 18 inches. Many gardeners prefer to dibble the plants in: in either case the greatest care must be taken that the earth is pressed well around the roots. Each plant should be inserted as far as the base of the bottom leaves, and a little water should be supplied for the first few evenings. The subsequent culture is confined to weeding and occasionally stirring the earth during summer; and drawing it up round the stem when about 8 or 9 in. high.

The *cauliflower* is grown for the sake of the delicate white head. In order to keep up a succession, three or four sowings should be made in the season, the first sowing being made on a slight hotbed in February, or very early in March. The seedlings should be protected when necessary. Early in April a second and larger sowing should be made in the open ground, and about the middle of August a third sowing to stand through the winter. Shifts to two nursery beds are recommended, as this checks the growth of the stem and promotes the formation of the flower head. April sowings will be fit to plant out permanently in June; water well till strong. They will be heading in September, and will continue to improve until early winter. The cauliflower requires a deep, rich soil, open position, and plentiful root-watering in dry weather.

The *broccoli* differs but slightly from the cauliflower; the flower stem is longer, the head less compact. Too much manure cannot be used in the soil; a rich loam is what they delight in. The early varieties—purple Cape, Grange's early white Walcheren, Veitch's self-protecting autumn—should be sown from middle of April to middle of June; Snow's winter white at the same time; purple sprouting early in March; white sprouting early in April; for main crop, early in May. Prick out in nursery beds; finally plant out about two feet apart; water liberally till established. Autumn-flowering varieties must be watered well in all stages of growth. Before severe weather arrives, lay spring kinds over, with their heads facing north. This checks the action of the roots and

hardens the plant. The early sorts come into flower about August, when there is a scarcity of other culinary vegetables.

Brussels sprouts should be sown early in April, though March is recommended. They require a stiff, rich loam, and should be planted out about 20 inches apart. Keep ground well hoed. Some gardeners cut off the spreading top, and consider this throws strength into the sprouts; others condemn this practice.

Borecole, kale, and curlies are cultivated for leaves in winter, and sprouts in spring. Sow in April and August. Borecole not being very exhausting, may follow peas without fresh manuring, or may be placed between rows of peas or potatoes. The dwarf curled greens are an excellent variety. Tall green-curved stand severe frost. Cottage's kale is very tender and exquisitely flavoured. It stands very high, and should be allowed plenty of space. Sow late in March or early in April. Plant out in deep rich soil.

The *red cabbage* used for pickling is cultivated in the same manner as the white. Gather when head is thoroughly formed, and throw stems on refuse heap.

Savoy cabbage grows a compact head of deep green curly leaves, white within, and plentiful crop of sprouts on stem during winter. Sow early in April; plant out permanently 20 inches apart or between rows of peas, in May, June, and July.

Cabbage fly.—This insect causes the leaves to turn yellow, and to droop in the sun. When the presence of the fly is suspected, the plant or plants infested should be removed and burnt, and the ground heavily salted or limed.

Peas.—The soil best suited for this summer delicacy is a rich light loam, full of vegetable matter, but free from new dung. Ordinary garden soil properly dug and manured, however, will produce a good crop. Crops are sometimes obtained, even in the open air, as early as May; June, however, is the more general month for picking the first fruits. For early crops, plant in warm and sheltered situation about the middle of November, and again in

January, if there is no frost, and onward to March. For main crops plant in open, airy position in March, and so onward to June or July. It is better to plant a row or two at intervals of two or three weeks, than to plant half-a-dozen rows at once. Take off the pods as soon as they attain a fair size, and do not allow any to ripen unless seed is required, as all the strength of the plant is thrown into the ripening process. Sow in drill 2 inches deep and 4 inches wide, covering the seed with friable soil. In sowing peas, they should be scattered evenly, at regular distances apart, so that there may be no crowding. If sown in successive rows, let the intervening space exceed the reputed height to which the variety grows by 6 or 12 inches. When the rows are 4 or 6 feet apart, many gardeners crop the intervening space with lettuce, radish, spinach, cabbage, etc. As the seed for the earlier crops will be some time in the ground exposed to various dangers, it should be sown thickly. The strong-growing branching kinds, which are used for the main crops, succeed better if sown thinly, but it is prudent to guard against loss from various causes by sowing all rather thickly. If the plants are found to be too close when fairly started, they can easily be thinned out. French gardeners sometimes sow peas in clusters, making holes 5 or 6 inches apart in the rows, and planting in each five or six peas.

When the plants are about 3 inches high, they should be slightly earthed up. When 5 inches high, place bushy sticks on each side, interlacing at top. Take care that the peas can reach the sticks; small brushwood placed at the bottom effects this. Early crops require the ground on each side to be spread with manure. As birds are very fond of picking the hearts out of the young pea plants, ~~and~~ so spoiling them, ~~some~~ method of protection must be adopted. Lines of white cotton or chalked string, pieces of fluttering white rag, or bits of bright tin or looking-glass, will keep them off, as they are very shy of anything bright. Even the dwarf sorts which attain a height of 18 or 24 inches only, are the better for sticking. Good early sorts are the

William Hurst, William the First and Daisy; for mid-season use *Hartford Success*, and for main crops and late season, *Dr. Maclean, Veitch's Perfection*, and *British Queen*.

Beans.—Beans are distinguished as *broad or garden*, and *kidney*. The latter comprise two species, the dwarf or French, including the white haricot, American Prolific, Canadian Wonder, etc., and the runner, including scarlet, so named for the scarlet flowers they bear—the Dutch white, and the painted ladies, which have white and scarlet blossoms.

Broad beans, like peas, can be sown in October, where the soil is light or well-drained, and well-sheltered; but if the soil is cold they may be sown in the following manner:—Let the ground be laid in ridges 3 feet wide, and 15 or 16 inches high, ranging east and west; on the south side of each ridge draw a drill half-way between the top and bottom, in which sow the beans about 3 inches apart. By this means they will be above the wet, and catch every ray of sunshine. When about 10 inches high, level the top of each ridge to the row of beans behind it; they will not require earthing up again. If sown in October, a succession may be sown in January in the same manner, and once a month till June. Those sown on level ground should have some earth drawn up to the roots when 3 or 4 inches high; this induces them to emit fresh roots. They are sown in rows about 4 feet apart, which leaves room for a row of broccoli, spinach, or lettuce between. On light soils the usual method is to stretch a line along where they have to be sown, and dib holes 4 inches deep, planting a row each side of the line 4 inches apart, zigzag fashion; but in wet soils it is better to drill them in. Good sorts will be found in *Early Mazagan*, *Green Windsor*, *Dwarf fawn*, or *Broad Windsor*, *Seville long pod*, *Clusters*.

The Mazagans should be sown in autumn, the long pods in January and February, and the *Windsors* from March to June. Garden beans require a sound, firm loam. They are very hardy, and transplant well.

French kidney beans are warmth-loving plants and require a light, rich,

loamy soil, and should be planted in an open situation. The seed should not be sown until the middle of April in sunny spots, or in the beginning of May in positions not so open to the sun, and from this time crops may be sown in succession once a fortnight, or thereabouts, until the end of July. Plant in rows from 18 inches to 2 feet apart, and 2 inches apart in the rows. The seed should be dibbled or drilled in to the depth of 2 inches. As the beans grow, draw the soil up round each plant as high as possible. The best sorts are:—*Canadian Wonder*, *Nephus ultra*, "*Monster*" negro.

Runner beans require a light, rich soil, and the situation should be sunny and open. Plant in double rows 9 inches apart, dibbling or drilling the seed in to the depth of 2 inches and 4 inches apart in the rows. At least 6 feet should be allowed between each series of double rows. When about 4 inches high, a little earth should be drawn around the stems, and 8-foot sticks stuck in the ground along each row, crossing at the top. If set in single rows, horizontal sticks should be tied to the upright ones about 6 inches from the top, for strength. Instead of sticking the beans, cording is sometimes adopted. This consists in erecting 8-foot stakes at about 10-foot intervals, running a stout cord from end to end, along top and bottom, and knotting other cords between, about two to each plant. This is tedious, but it is said to be cheap and effective.

When the summits of the sticks are reached, the tops of the plants should be nipped off and kept stopped. This induces the plant to throw out fruit-bearing laterals. Never allow any pods to ripen; pull them off even if not wanted. "*Gather beans and have beans*" is an old and true saying.

Lettuces.—Lettuces are of two classes: cabbage—a low, roundheart variety—and *Cos*, which are tall and upright. They require a rich, free, well-manured loam. Sow the seed broadcast, scattering rather thinly, and cover with a sprinkling of very light soil, or they may be sown in shallow drills a foot apart. If the ground is dry, tread the seed in. As the plants rise, thin them to 2 inches

apart, then to 9 inches, transplanting those drawn. Sow from February to July for monthly succession of spring and summer Cos, and in August and September for succession of winter and early spring cabbage.

One of the most hardy sorts, and best for sowing at any time, is the black-seeded Bath Cos; it is very crisp, and of good flavour. Another good sort is the Moor Park Cos, and also the Paris white Cos. Of the cabbage lettuces, one of the best, especially for winter use, is the hardy green Hammer-smith; but it is apt to run in summer and autumn. The brown Dutch, Tennis-ball, and Tom Thumb cabbage lettuces are good varieties, and very hardy, the last-named being excellent for spring sowing. The Malta or drum-head cabbage is a fine large lettuce, and good for summer use, as it is not apt to run if allowed plenty of room. The Neapolitan cabbage is also noteworthy for its great size and crispness. The advantage of cabbage lettuces is, that they require no tying up, which prevents Cos lettuces being serviceable in winter, as they so soon rot off when tied; but such sorts as the London Cos, which turn their leaves in without tying, may be grown advantageously in winter. All the other Cos lettuces require tying up, to heart, crisp, and blanch them. This is done by passing a strip of bast round the middle. Too many should not be tied up at once, as after a few days the plant is apt to run to seed and to become bitter.

Radishes.—These require a light, rich, loamy soil; and if they are grown on ground that has been manured for the crop that has preceded them so much the better, for to be good they must be grown quickly. Sow broadcast, thinly, or in drills from 3 to 4 inches apart for long radishes and the smaller sorts of turnip radishes, and from 4 to 6 inches apart for the larger sorts. Radishes are often sown much too thickly, and this causes the roots to be small, hard, stringy, and disagreeably hot in flavour. Early sowings will require to be protected from frost by a covering of litter, but this must be removed every mild day, as soon as the plants appear above ground. When the weather is hot and the ground dry,

well water before sowing; and some days before drawing, water the beds well, and keep the soil moist until the crop is finished. The Spanish varieties should be sown in drills, about a foot apart, and thinned out when sufficiently strong to draw, so as to stand from 4 to 6 inches apart in the rows.

Carrots.—There are many different sorts of carrots, as may be seen on reference to the price lists of the growers, but the early horn (very sweet and delicate flavour) is generally used for forcing and early crops, James's intermediate for second or late crop, and the improved Altrincham for main crop; but much depends on soil and locality. They may be sown in frames in gentle heat in January, and in borders from March till the latter end of July. The main crop may be sown from the middle of March to the middle of April, according to situation.

Sow broadcast on beds of well-manured, deep, light soil with which some chalk is mixed, and thin early horns to 3 or 4 inches for the smaller sorts; the larger sorts are better sown in drills. If it is preferred to drill the seeds, let the drills be 12 or 15 inches apart, as shallow as possible, and sow the seed continuously along the drill, or three or four seeds at intervals of 6 or 8 inches; this economizes the seed, and admits of going amongst the plants without treading on them. Light ground should be trodden before it is drilled; the seed hangs together, and should be separated by rubbing it up with soil, if sown broadcast; but this is unnecessary if sown in drills. The seed is very light, so that a calm day should be chosen for sowing; a little wind is apt to blow it anywhere but into the right place; it takes from one to three weeks to germinate.

As soon as they are well above ground, thin them out with the hoe to 6 inches apart. Keep the soil loose and free from weeds. Carrots may be drawn directly large enough, but main crops for storing should not be taken up until the end of October. Store in a dry room, and riddle over the layers some dry earth or sand.

Parsnips.—Parsnips succeed best in a deep, free, rich soil, and as the application of fresh manure tends to the

production of forked and badly-formed roots, ground in high condition (having been heavily manured for the previous crop) should be selected. When the manure is applied let it be well rotted, short farmyard manure, or use guano. The ground should be trenched 2 feet 6 inches, and ridged up as long as possible before sowing.

Sow in lines 15 to 18 inches apart, early in spring, scattering the seeds thinly, and covering them $\frac{1}{2}$ inch to 1 inch with the finest of the soil. The usual period of sowing is between the end of February and the beginning of May. As soon as the plants are 3 inches high thin them out to 9 inches apart. Keep the soil open with the hoe, and free from weeds. Take up the roots about the beginning of December, and store in damp sand.

To produce "show" parsnips or carrots, make a deep hole with a long dibble, fill up with fine, rich earth, sprinkle a few seeds on top, and as soon as they are up remove all but the centre one.

Turnips.—A deep, well-manured and sandy soil is best for turnips. The early white and the yellow Dutch are very good sorts for first crops, and the orange yellow and red globe for autumn sowing. Sow from March to July in very shallow drills a foot apart, and cover with a sprinkling of fine soil. May is the best month for Swede turnips. For winter and spring crops sow from the beginning of August to beginning of September. Thin out to 6 inches apart, keep the ground loose with the hoe, and free from weeds. Dust the plants with lime early in the morning if the fly makes its appearance. In early spring the young "tops" make an excellent substitute for cabbage greens.

Beetroot.—Beetroot should be sown at the middle of March or the beginning of April, in deep, rich, ground, fully exposed to the sun, and quite open and away from trees. Having previously trenched the ground and laid manure at the bottom of each trench, sow the seed in shallow drills, 15 inches apart, and drop three or four seeds at intervals of 10 inches or a foot apart, or sow thinly along the

drill; cover lightly with fine earth, and beat with the spade. Thin the plants to 12 inches apart, leaving the best coloured rather than the strongest looking. They should not be transplanted or they will certainly be dwarfed. Keep the soil loose and free from weeds. Some of the roots will be ready in September, but October is the best month for lifting. They should be carefully taken up, so as not to break the tap roots, or they will bleed. Trim the leaves off and store in dry sand. Dell's crimson beet is not only an excellent vegetable, but its deep purple leaves are admirable garden ornaments.

Onions.—A strong, deep, rich soil is most suitable for this crop. In February or March sow in four-foot beds, in drills half-an-inch deep and 9 inches apart. Sow thinly and cover with fine soil. About the middle of August sow for a supply during winter and the following summer. When small bulbs such as are used for pickling are required, sow the Silver-skinned thickly, early in May, on poor soil and in a dry situation, and thin out sparingly. Keep the ground clear of weeds, and thin out to about 6 or 8 inches apart. In September, when the bulbs should be well grown, twist the necks, and take up the crop when the leaves have turned yellow. Spread them in an airy shed, or sunny spot in open air, and when quite dry store in a dry, cool place. The following varieties may be recommended.

White Spanish—the mildest in flavour, and most useful for main crop. *Brown Globe*—a hardy, useful kind. *Ailsa Craig*—grows to a great size, and particularly mild-flavoured. *Blood-Red*—a very useful, hardy kind. *James's Keeping*—keeps longer than any other variety. *Silver-skinned*—the best for pickling. *Tripoli Italian Red*—the best variety for autumn sowing. *White Lisbon*—the variety sown in autumn by market gardeners for spring onions.

Leeks.—Leeks prefer a light rich soil, and in a moist season will grow to a very large size. The London Flag is the favourite, though many growers prefer the Musselburgh and its sub-varieties.

For main crop sow in April in half-

inch drills 12 inches apart. Cover with light soil and tread. Thin out to 6 inches apart, and water in dry weather.

To transplant, make holes 6 inches deep and 9 apart, in well-manured ground. Take some strong plants, trim off the suckers and straggling roots, place them in the holes on some powdered manure, pour in water and fill up. This will produce large and excellent leeks.

Shallots.—These require light rich soil, with which wood ashes and soot have been mixed. In autumn or at beginning of spring plant the bulbs in rows 9 inches apart and the same distance between each bulb, pressing each firmly into the soil until nearly hidden. Many people prefer shallots to onions, and most allotment gardeners have a row or two. It is a very prolific plant, producing a large number of bulb offsets.

Spinach.—This delicious vegetable requires a light, rich soil which has been deeply trenched and well manured, and plenty of moisture; if the ground or weather be dry, water should be liberally supplied. The spring and summer crops are generally sown between rows of other vegetables, peas, celery, beans, etc. Sow the round-seeded varieties thickly in shallow drills, in January and March for the spring and summer crops, and at intervals of three weeks until the middle of July. Cut the leaves as soon as a fair size is attained, as they soon run to seed. From August to September sow the prickly-seeded triangular-leaved variety for the winter crop, and thin the plants to 9 inches apart. For all kinds the ground should be kept open and free from weeds.

Celery.—The cultivation of this plant is not to be undertaken lightly. The seed should be sown in gentle heat in February, and successively until May, on a warm border. Transplant to shallow trenches in warm nursery beds. In July, having manured and trenched to depth of 18 or 24 inches, dig out a trench a spade deep, throwing the displaced soil in a ridge on each side. Put in a thick layer of well-rotted dung and dig it in well, watering freely if a dry season. Select strong plants from the

nursery beds, cut off loose fibres and side-suckers, leaving all true leaves. Insert in the trench with trowel, and water every evening until they begin to grow. Remove the soil from the ridges to earth up every time the plants advance 3 inches, and manure each side of the plants. Continue the earthing up until 18 inches above the garden level if necessary. Some gardeners tie up their plants with bast, to assist in the blanching. In September the first crop should be ready. There are many kinds of celery in cultivation. Early Dwarf and Solid White are recommended.

Mustard and Cress.—Choose a sunny spot for March and April sowings, and a moist and sheltered situation from April to October. Sow thickly in wide, shallow drills every fortnight for succession of crops. Only the seed leaves are eaten, as the later ones are rough and hot. From October to March sowings may be made in window-boxes filled with light rich mould.

Jerusalem Artichokes.—This is a hardy vegetable, and requires no protection during the winter. It is an excellent substitute for potatoes, and is very prolific; indeed, it is difficult to get the ground clear of them when once grown, for the smallest tuber left will grow. To obviate this it is desirable to lift every tuber when raising the crop. The artichoke likes a light rich soil, and if the ground is poor or heavy it should be enriched with manure or lightened with sand. In March, plant small tubers in rows three feet apart, and one foot apart in the rows at the depth of 6 inches. Slightly earth up as they grow, and keep the ground loose and free from weeds. Take up at end of November and store in sand or earth, or leave the tubers in the ground until needed. A gallon of tubers will plant 40 yards of rows.

The varieties are: Jerusalem (red-skinned and irregular in form). New white mammoth (white-skinned and globular in shape).

Vegetable Marrows.—This very profitable vegetable requires richness of soil, warmth, light, and moisture. Given these, and its culture is easy.

Sow the seed in April or May in pots or pans of rich soil, and place in warm situation. Pot off the young plants when they show four leaves, harden in cold frame or window for planting out at end of May. Well manure the ground, place the plants in a triangular form 3 feet apart, with the earth from the pots around the roots, and water liberally. Most nurserymen will supply sturdy young plants at 2d. each. It is desirable to make a slight trench round each plant when put in the ground, that the water may be retained by the soil near to hand. Marrows cover, while growing, a very large space, and this should be allowed for. If the vines are pegged down at a joint fresh roots will be sent out and new strength imparted; should a frost be anticipated, turn an old box over the young plants at night. The best sorts to grow are: Long Green, Pen-y-bed, Long White Ribbed, Large Cream. Bush marrows are very suitable for small gardens, as they are of the non-trailing variety and take up less space than the ordinary kinds.

Rhubarb, although a fruit, is generally included with vegetables. It is very easily grown, and no garden should be without it. Autumn and early spring are the best seasons for planting, though any time will do. The ground should be well trenched and manured, and the situation open. Place the plants from 3 to 4 feet apart, and water well for a day or two. To increase the plants, take up all old roots and break into pieces; every portion with a crown will grow. To force rhubarb, cover the plants with large pots or old casks, and stable manure. The best sorts are: The Queen (early red), Royal Albert, Paragon (very prolific), Stott's Monarch (very large variety).

Cucumbers.—These require glass and a hotbed. They can be grown at any season of the year in a temperature ranging between 70° and 75°. Plant the seed singly in small pots filled with rich mould, and place in the frame. In two or three days the leaves will have made their appearance. Take out of the pot when 3 inches, and place on the surface mould

of the hotbed. Pinch out the joint above the second leaf, when two lateral shoots will be sent out; pick off the top. After that, train the laterals regularly over the bed, stop them above every fruit, and add fresh soil as the plants grow, till the bed is level, taking care that the new soil is of the same temperature. Before the months of October and April it will be necessary to set the fruit. That is, take a male flower, and pull off all but the centre, and apply this to the centre of the female flower, distinguished by the rudimentary fruit around it. This fertilization is usually done by the bees in the warm months. The sorts recommended are: Improved Telegraph, Duke of Edinburgh, Duke of Albany, Rochford, Lockie's Perfection, Masterpiece.

Cucumbers can be grown in the open air, by ridging beneath a wall with south aspect, in May, training the plant on wire netting nailed to the wall.

Horse Radish is easily grown; it requires a deep soil and a shady corner. Break up the soil in the winter, make a row of holes with a dibble, 2 feet deep and 2 feet apart; procure some crowns of old plants, an inch or a half thick; push them to the bottom of the holes, and leave them without filling up the holes. The soil should not have much manure, or the roots will fork.

Hotbeds.—The making and maintenance of hotbeds may be summed up and set forth in a few words as follows:—1. Choose a position that is naturally dry, or can be rendered dry, having a south aspect, situated, if possible, on a slight incline, sheltered from cold winds in rear at the sides. 2. The dung having been tempered, or "sweetened" sufficiently by turning over and wetting, mark out the space to be occupied by the bed, making it larger by 18 inches every way than the frame which is to stand upon it, or in other words, that there may be a margin of 18 inches every way all round the frame when the frame is placed on the hotbed. 3. In constructing the hotbed, pile up the dung in such a manner that the manure may be higher at the back than in the front,

and beat down the dung with the fork when the bed is made, in order to impart solidity to it. 4. Put the frame on the surface of the manure, but leave the lights off for three or four days to allow the emanations of rank steam to pass off. 5. Cover the surface of the dung with mould in the proportion of one barrow load of good loamy soil to each light, and make the surface of the mould level, covering the dung entirely; or, if preferred, form hillocks for the reception of the plants. As soon as this is done, put on the lights. 6. Raise the plants required in pots placed within the bed under the frame, and sunk a little in the mould. When about a week old, turn out of pots and set the plants, with the mould from the pots undisturbed, in the mould that covers the manure. 7. Maintain the temperature of the air within the frame by putting over the lights in frosty or windy weather during the early stages of the bed's existence. 8. As the heat of the bed declines, prevent its diminution by coatings of fresh dung, technically called "linings" piled up round the bed on all sides. 9. If necessary, as time progresses, remove the old linings and replace by fresh manure, and if the roots of the plants in the frame have penetrated into the old linings, they must be allowed to remain where they are, and fresh linings must be again piled up outside the first set. 10. As the temperature of the bed should maintain an average of 75°, as soon as it is found to fall below 70°, lose no time in putting linings round the bed. 11. It is as well to place mould on the surface of the hotbed outside the frame, and to utilize it for growing radishes, lettuces, or small salading, which are all the better for quick growth in a position of this kind.

Tomato.—To grow the Tomato perfectly it requires considerable heat and every possible ray of sunshine, as well as a free circulation of dry, warm air. Seeds may either be sown thinly in 5 inch pots filled with light soil, and potted off singly in 3 or 4 inch pots as soon as they make the second pair of leaves, using a slightly

richer soil, or they may be sown two seeds in a small pot, the weakest being pulled out. After the seeds are sown they should be put into a warm place and kept always moist until they are ready for potting off, after which they should gradually get more light and air as they strengthen. When they reach the height of fully 6 inches they may get their fruiting shift if that is to be pots or boxes; if beds or borders it will be better to repot into 6 or 7 inch pots, using a still richer compost, and grow on till they reach 12 inches high before planting out. When well established and growing freely, tomatoes require plentiful supplies of water at root, and when carrying heavy crops of fruit it is most important that they never get dry. They thrive best in a temperature of 55° to 60° at night, with a rise of 10° during day and another 10° with sunheat. To grow tomatoes successfully it is advisable to buy small plants, which should be planted out when the weather is suitable. Plants purchased are generally more forward than those grown by amateurs.

Asparagus.—To raise asparagus from seed, which it yields in abundance if allowed in the autumn, the seeds should be gathered when fully ripe, hung up to dry, and then rubbed out. It may be sown thinly on ground that has been well dug up, but not manured, any time from the beginning of March to June. The plants make more root than top the first year; but if they are kept clear of weeds, and the ground stirred often between them, they will grow vigorously the second year, and be fit to plant out the following spring. Beds of asparagus may be made as late as September. Plantations should be made in a rich soil, neither wet nor too stiff. On this spread a coating of rich, well-rotted stable manure, three or four inches thick. Trench the ground freely, then divide into four-foot beds, with alleys two feet wide between each bed. Select strong one-year-old plants without tops, and plant them two rows in each four-foot bed. As soon as they begin to grow, give a good watering with salt and

water, about the strength of seawater, and then keep the bed clear of weeds. Established beds of asparagus require top-dressing every spring, March being the best month for the purpose.

KITCHEN GARDEN CALENDAR

Briefly, the principal operations of the months areas follows :—

January.—Trench and dig up ground as far as possible; sow early peas and broad beans in sheltered situations; set early ash-leaved potatoes in spare frame.

February.—Trench and dig up ground, weather permitting; plant early potatoes, and sow for early crops on the warmest borders.

March.—This is peculiarly the gardener's month, as maincrops of peas, beans, onions, carrots, spinach, cabbage, and many other vegetables are sown now, and young plants pricked out from frames.

April.—Sowing, planting, and preparing are continued; weeding and thinning out are performed, seed beds watered if dry weather, and cabbage and lettuce plants transplanted.

May.—Divide rhubarb roots, for new plantations; stake peas, and sow others; thin out onions, carrots and parsnips; sow dwarf and runner beans on warm border; tie up hearting lettuces; earth up potatoes; bend outer leaves of cauliflowers over the head as it appears.

June.—Peas, beans, cauliflowers, early carrots and potatoes come in this month; sow more peas and beans; continue earthing up; use watering-pot freely; gather sweet herbs when in bloom, and dry in shade for winter.

July.—Vacant ground is prepared for autumn and winter crops. Plant out main crop of celery. Turnips and lettuce are sown, also endive and spinach for winter-crops, and last sowings made of broccoh, scarlet runners, and French beans.

August.—Scatter lime over slug and caterpillar-infested savoy and cabbage. Earth celery and leeks; cut down the stems of gathered artichokes; hoe and thin out turnips; take up and dry onions as soon as stems wither;

gather and dry onion and lettuce seed as it ripens; plant out broccoli, savoys, curly kale, and brussels sprouts; sow red Spanish and Welsh onions, parsley and early cabbages, for next year's crops.

September.—All arrangements for winter and spring crops should be completed. Earth up celery. Take up forward potatoes and onions. Plant out cauliflowers, cabbages, broccoli, and small saladings.

October.—Take up carrots, beet-roots, and potatoes. Earth up celery as needed. Earth up cabbages and savoys to base of first leaves. Any sowing for spring crops left from last month should be done, including early peas, and beans, and celery. Plant lettuce under south wall. Continue planting out spring cabbage.

November.—Lift late potatoes, beet and carrots. Trench and ridge unoccupied ground and cover with manure. If weather is open, continue sowing peas and beans in sheltered border.

December.—Continue the digging, trenching, and manuring. Prepare compost heaps. Protect plants from frost. If mild, sow early peas and radishes in warm borders, and small salads and cucumbers on hot beds.

THE FRUIT GARDEN

Strawberries.—The strawberry requires a deep, rich, loam soil. Beds should be made in March or September. Having obtained some strong runners of an approved variety, plant them in rows 2 feet apart and a foot apart in the rows. Fix them firmly in the soil and water well. If planted in September, sprinkle some manure over and about them before the first frost. To obtain fruit of the best quality a bed should be made every September for three succeeding years. The first spring no blossoms should be allowed to expand, and the runners should be cut off. The second and third years they will bear a full supply of fine fruit. In the September of the fourth year the bed should be dug up, manured, and re-planted. Treat each bed in the same way.

Bush Fruits.—To grow currants and gooseberries in perfection a deep and

tolerably rich soil is required; and, before planting, which should be done between October and February, this should be deeply trenched and manured with thoroughly rotted dung. Both are propagated by cuttings, which should be well-ripened wood of last year's growth, slipped from the tree, and from 10 to 12 inches long. Having selected the slip and separated it from the parent stem, cut off the top, leaving four shoots; trim off all others. Make two or three incisions, penetrating half through the stem, to expedite the process of rooting, and plant the cuttings in a nursery bed in rows a few inches apart each way. When the cuttings have made roots, transplant them into a bed of deeper and richer soil, pruning back the four shoots to 5 or 6 inches, and leaving two side shoots to each. Here they may remain a second year, the four shoots now multiplied to eight, and the head beginning to assume its permanent shape.

In the autumn of the second year the bushes may be planted out in their permanent stations, which may be from 3 feet and a half up to 7 or 8 feet apart according to circumstances. In planting, dig a hole larger than the roots, and 18 inches deep, and place some rich mould or manure at the bottom. Having trimmed the roots of the bush, place it in the centre of the station with the roots radiating in all directions, regularly spread out, none of them spreading over others, and sprinkle two inches of the soil over them, pressing it gently all round into the roots; over this spread a thin layer of well-rotted dung, and fill up the whole to the level of the surrounding soil. This done, water the roots well, and prune back all the shoots so as to form a cup-like bush, with branches radiating from the centre. Gooseberry and currant bushes produce their fruit both on the young wood and on the wood 2, 3, and 4 years old; and generally along the branches. The general bearers, therefore, young and old, of proper growth and well ripened, must be continued as long as they remain fruitful, cutting out from time to time such as are of irregular growth or too crowded—all branches

and decayed wood, together with the superfluous or over-abundant young wood of last summer; but retaining a selection of young shoots where necessary, to fill up gaps in the bush; the rule being to keep them trained to a single stem below, while the head is kept open and regular.

Currants—Red and White.—When the requisite number of branches has been produced, so as to form a uniform bush, the greater part of the young shoots should be taken off annually, leaving only those that may be required for new branches, and shortening these to 4 or 6 inches with a clean cut just close to a bud. In pruning off the superfluous lateral shoots, take hold of each branch at its extremity with the left hand, and, with the knife in the right hand, remove every fresh lateral up the stem, leaving to each a short spur of a quarter or half an inch in length; from these spurs the branches of fruit are produced. Thin out the spurs when they become too crowded.

To grow fine currants, plant the bushes 5 feet apart in an open sunny position, and every autumn dig in a good dressing of manure, taking care not to injure the roots. Cut back all young roots, at autumn pruning, to 2 inches.

Gooseberries.—Cuttings should be planted any time from October to March. Select shoots of medium size, not root-suckers, about 15 or 18 inches long. Cut the base square, not slanting; remove every bud from the bottom to within 2 inches of the top. Plant in the shade, 4 inches deep, and fix the earth tightly around. At the end of the second year's growth, allow only eight leading shoots to remain, and plant out, with a ball of earth, to permanent situation, from 3 to 6 feet apart. January is a good pruning season.

Raspberries.—Raspberries flourish in any good rich soil, but do best in a black unctuous earth. As a rule, neither raspberries nor black currants do well where cherry trees thrive.

Trench and manure the ground before planting: in October select strong canes, and put in singly, or in bunches of three, cut to different

heights. Stake them in the spring. In June remove all but six of the strongest suckers; but if autumn-bearing plants are wanted, remove the old canes, and encourage the suckers. Canes for this purpose should be planted singly, about a foot apart, not in triplets, and they must be kept thin.

The ground in which raspberries are grown should not be broken up, but have a good yearly top-dressing of manure.

FRUIT TREES

For small gardens, dwarf trees, espaliers (border trees with branches trained horizontally right and left of stem and fastened to stakes), and root-pruned standards, are most suitable. These can be bought at a low cost from most nursery gardeners, who will already have grafted them.

Planting.—The time for planting is between October and February. November is generally considered the best month.

Having dug out a pit 3 feet square and 3 feet deep, lay 10 or 12 inches of brick or other hard rubbish at the bottom, and ram it firmly; fill up with soil according to the depth the tree should be planted.

Cut off small fibres and shorten the larger roots to about 6 inches from the stem. Spread these out in the pit, cover with soil, and tread firm. When the soil is a sticky clay, the roots of the tree should be spread out just under the surface, and rich, light mould placed over them, so as to form a mound; but in no case do more than cover the crown; deep planting is harmful.

If for a dwarf, standard, or espalier, after cutting away the tap-root (except in the case of the peach, which, having a tendency to throw up suckers, should have the roots directed downwards) place it upright in the centre of the station; spread the roots carefully in a horizontal direction, and cover them with prepared mould to the required height, supporting the young plant with a strong stake, driven firmly into the ground, and tying the stem to it, after surrounding the stem with hay or straw, or even a

wrapping of old felt carpet, so that the string may not bruise the young tree or cut into the bark, pressing the soil gently, but firmly, over the extended roots. When the operation of planting is finished, cover the ground all round the tree with a layer of half-rotten dung. This process, called mulching, consists in spreading a layer of short half-rotten dung 5 to 6 inches thick round the stem, in a radius 6 inches beyond the extremity of the roots. The mulch should be spread evenly with the fork, and gently pressed down by the back of the spade, or, if exposed to wind, pegged down to prevent its being blown away. If a wall tree, let the root be as far from the wall as may conveniently be, with the stem sloping to it, the roots being extended and covered in the same manner with the soil. The object is to give the roots as much room as possible in which to ramify.

Grafting.—As the stocks of fruit trees are propagated by seeds, cuttings, and layers, so the various kinds and varieties are perpetuated and disseminated by grafting, budding, and inarching these stocks.

Grafting, which is a very old practice, is simply the union of two growing plants by means of their juices. The season when it should be done is about the middle of March, when the sap is rising, and the usual process, called tongue or cleft grafting, consists in cutting the stem of the stock across, neatly and smoothly, and making a cleft in it, into which is introduced a tongue or slice of the graft or scion (that is, a part of a branch of a tree of the desired kind), binding the two together with a strip of mat, and plastering the wound with mixed clay and horse-dung. When the graft, which is now the stem of the future tree, has become thoroughly united and has grown a few inches, the plastering may be taken off.

Inarching consists of striking the branches of one fixed tree upon another fixed tree, introducing the former into a cut or cuts made in the latter.

Pruning.—The object of pruning is to prevent the growth of the tree running to wood, and by concentrating

It upon a few branches, to induce the growth of large fruit.

For small trees, the only implement needed is a strong knife with a curved blade. The cut should be made at an angle of 45 degrees, beginning on the opposite side to, and on a level with the base of a bud, and terminating just above it. If it is necessary to cut away a branch altogether, a small portion should be left on the stem, because the wound being smaller than if cut lower down, the surface will be sooner healed. If branches are too rigorously shortened, strong useless wood without fruiting spurs will be produced. If the branches are well placed, let them have free course. No fruit spurs should be allowed to grow beyond two or three inches in length.

Pruning should be performed while vegetation is entirely at rest—the period which follows the severest frosts, and which precedes the first movement of vegetation; that is to say, the end of February or the very beginning of March, in ordinary years. If trees are pruned before the strong frosts of winter set in, the cut part is exposed to the influence of the severe weather long before the first movement of the sap takes place, which is so necessary to cicatrize the wound, and the terminal bud is consequently often destroyed.

To prune after vegetation has commenced is no to be thought of; therefore let all chief pruning be done in February, if the frost has disappeared, especially for the peach, whose buds placed at the base of last year's shoots

FRUIT TREES.	SOIL.	MODE OF PROPAGATION.	TIME.	HOW GROWN.	ASPECT.
APPLE .	Rich, moist soil, or cool, sandy soil, of medium consistency.	Grafting on stocks from pips, or on Paradise stocks from layers for dwarf trees, Cordons, etc., or on Doucin or French stocks also from layers.	March and April	Standard, Pyramid, Espalier, i.e. trained with horizontal branches on stakes or wire; single or double Cordon, also horizontal.	Any aspect; does best in open.
APRICOT .	Clay soil, open and calcareous, and not deep.	Budding on plum stocks.	July and August.	Pyramid in Orchard House; Fan or Oblique Cordon on wall.	Any aspect from east (by south) to west.
CHERRY .	Dry and light sandy loam on dry subsoil, or chalky soil with chalk subsoil.	(1) By budding on small stock or St. Lucie Plum. (2) By grafting with Cleft or Crown graft on wild cherry stock.	(1) July & August. (2) March.	Standard, Pyramid, Double Vertical Cordon, Single Oblique Cordon and Fan. •	Any aspect, but chiefly east, west, and south for trained trees.
PEACH AND NECTARINE	Open soil, deep, fairly consistent, calcareous, and not too moist.	Budding on plum stock.	July.	Pyramid or bush in Orchard House; Fan and Single Oblique Cordon on wall.	South-east is best, but any aspect from east to south-west will do.
PEAR .	Deep clay soil, containing flints, cool, but not too moist. •	(1) Grafting on stocks from pips or on quince stocks. (2) By budding on smaller stock.	(1) March and April (2) August	Standard, Pyramid, Espalier, Fan, branches horizontal; Vertical and Oblique Cordon, single and double.	Any aspect, but east and west are most suitable for trees trained on walls.
PLUM .	Clay soil, open and calcareous, and not deep.	(1) Budding on plum stock. (2) Grafting on plum stock.	(1) July. (2) March.	Standard Pyramid, Fan, and Single Vertical and Oblique Cordon.	Any aspect, but chiefly east, west, and south for trained trees.

are particularly exposed to the action of the ascending sap.

A writer whose merit and abilities are only now receiving their due recognition (Henry Kingsley, who was always overshadowed by his more famous brother) has left us in *Hornby Mills Garden* a description of an old-fashioned garden which he knew and admired, and which might well be imitated in these days. The reader will do well to look at this famous little essay.

THE FLOWER GARDEN

Classification of Flowers.—Every flower is classed under one of three heads: annuals, biennials, and perennials.

Annuals live one year only. They are subdivided into *hardy*, which can be grown in the open air, and *half-hardy*, which require protection while young.

The *hardy annuals* comprise such plants as sweet alyssum, prince's feather, cornflower, some of the campanulas, rocket, larkspur, godetia, sunflower everlasting, candytuft, sweet pea, Virginian stock, stock, French poppy, mignonette, nasturtium, speedwell, and *Phlox Drummondii*.

Any ordinary soil is good enough. Sow very hardy ones in sheltered borders in September. If they survive the winter's frosts they will bloom early in spring. Spring sowings for summer blooming are made from the middle of March to middle of April. Later sowings for autumn blooming are made from middle of May to middle of June. Having prepared and raked the ground, sow the seed evenly, and sift a sprinkling of fine mould over. Thin out when grown if too dense. If intended to transplant (a dangerous operation), lift half-grown plants, and do not disturb the tender roots.

Half-hardy annuals include China aster, balsam, Indian pink, glory pea, gaillardia, convolvulus major, lobelia, ten-week stock, oxalis, and African and French marigolds.

Sow the seeds in March or April in pots or pans, shelter in a pit or plunge into a cooling hotbed. The temperature should not fall below 55° or rise above 75°. Shade young plants from

strong sun, but give plenty of air when weather is favourable. Harden off gradually, and remove to flowering quarters about middle of May if the weather is warm.

Biennials are sown and grown in the first year of their life, come to maturity, flower, seed, and die in the second. The following biennials are very hardy and need no protection during the winter:—Canterbury bell, sweet-william, foxglove, French honeysuckle, honesty, scabious and mournful widow. Giant or Brompton stock needs shelter during the winter. Some biennials sown in early spring will flower the same season.

Sow seed of biennials during September. They will bloom the next summer. Sweet-williams are preserved by taking off shoots.

Perennials live a number of years. They include tubers and bulbs, and herbaceous plants, some of which retain their leaves and stems, while some die down in the winter.

Herbaceous perennials are very beautiful, and, together with some hardy bulbs, are very suitable for gardeners of little experience or leisure.

Any ordinary garden soil is suitable, but a light, easily worked soil, rich in vegetable mould, is best, though many will grow well even in heavy lumpy soil. Some plants of this class are propagated by division of roots, made in February or March, just as they are showing indications of making fresh growth. Others may be propagated by means of layers or cuttings, or raised from seed. Herbaceous plants are improved, and will be more healthy and slightly, and flower better, if they are taken up every three or four years, divided or reduced in size if needful, and then separated after digging the ground somewhat deeply, turning it over and breaking it up thoroughly. Plant firmly, pressing the earth well round the collar of each plant. The borders in which herbaceous plants are set should be kept clean and free from weeds. The plants themselves should be watered occasionally, if the situation and summer droughts are such as to render it necessary; those requiring support from sticks should be carefully staked.

and when the flower stalks and flowers begin to wither, they should be removed.

The following well-known herbaceous plants are perennials :—Snapdragon, columbine, Michaelmas daisy, double convolvulus, campanula, wall-flower, clematis, lily of the valley, carnation, pink, daisy, dog's tooth violet, gentian, geranium, Christmas rose, day lily, spirea, candytuft, blue flag, Japanese iris, creeping jenny, musk, lobelia, forget-me-not, primrose, polyanthus, London pride, violet, hollyhock, pansy, rose, chrysanthemum, phlox, and many others.

Tuberous and bulbous perennials include crocus, gladiolus, hyacinth, tulip, lily, snowdrop, daffodil, dahlia, cyclamen, anemone, peony, ranunculus, iris, aconite, jonquil, tuberose, etc.

Generally speaking, a light soil or sandy loam is preferred by bulbs, and if the garden soil be at all inclined to heaviness, it should be lightened by working in sand, at and around each spot in which a clump of bulbs is planted ; if the soil be poor, add some well-rotted manure and leaf mould.

The season for planting begins in October for hyacinth, and ends in April for late gladioli. As a rule bulbs like to be planted deep, both because they then escape the frost, and because many of them have a tendency to rise to the surface. Many gardeners make it a practice to lift and dry the bulbs after flowering is done and the leaves have withered away, but as the continuance in the same place leads to the formation of splendid masses of flowers, the amateur gardener should leave the bulbs where they are, provided that the drainage is sufficient and the soil suitable. As a general rule, bulbs should be planted in clumps, as the floral effect is thus much better than when isolated.

Climbers.—The climbers most in favour are ; Virginia creeper ; clematis, white and purple ; ivy, common, Irish, and variegated ; jessamine, yellow and common white ; honeysuckle, common Japanese, and trumpet ; common passion flower ; wisteria, white and purple ; roses, crimson rambler, Gloire de Dijon, William Allen Richardson, and hosts of others.

From general considerations of the main classes of flowers, we will now pass on to plain directions for the culture and management of some of the best known and most useful flowers, arranging them alphabetically, for convenience of reference.

Aconite.—Hardy herbaceous perennial. The most common are monk's-hood, tuberous rooted, and wolf's-bane, fibrous rooted. They grow from 3 to 5 feet in height, producing long spikes of helmet-shaped flowers, blue, white, purple, and yellow. Propagate by division of roots and by seeds.

Anemone or Windflower.—Hardy tuberous perennial, with very beautiful flowers, single and double, of various colours. They delight in a light, loamy soil, well manured, though an ordinary garden soil will do ; sea sand, or a little salt mixed with the soil, is a good preventive of mildew. Plant from October to end of March, when blossoms from February till July will be obtained. They are often not planted until the early part of the year. Leave the tubers in the ground.

Arabis.—Hardy perennial, single and double. Very hardy and profuse blooming perennial, flowering in the early spring, of dwarf habit, suitable for edging, rockeries, etc. White and pale pink.

Aster.—Half-hardy annual, very effective ; flowers are rich and varied in colour and perfect in form. Sow first week in April, the French or German kinds, in boxes or pans of light, rich soil, and place in sunny situation, under glass if possible. Prick out to nursery pans, and in three weeks transplant to blooming quarters in deep, rich soil. Water with weak liquid manure until they flower.

Auricula.—Attractive florist's flower, does well in an east aspect ; propagate by seed or offsets in rich sandy loam. There are two varieties. Show and Alpine. The latter is the hardier. Small pots should be used ; a full-sized plant should have only a 4 or 5 inch pot. Sow in pans from January to March, sprinkle seed on surface of soil, cover with damp moss till plants are up, then transplant to

3-inch pots. When propagating by offsets or divisions, take them in February or March or in August. They flower from February or March to June. In August, shorten tap-root, re-pot in compost, keeping collar above ground, water, and in November put under shelter, although the Alpine may be left in border.

Balsam.—Magnificent half-hardy annual. Sow seed in heat in March. Transplant to pots on south border in rich light mould. Stake, and water with liquid manure. They flower from July to September.

Basil.—Bush Basil is the most hardy. Sow in gentle heat in March, thin out, harden off, and plant in warm border in May or June.

Begonia.—Half hardy tuberous perennials, single and double, the flower and foliage being very choice. Largely used for bedding out and greenhouse decoration.

Belladonna Lily.—Perennial tuber. Handsome pale pink, or white, rose-flushed flowers. Plant in June or July in sandy-leaf mould to the depth of 8 inches, and leave bulbs undisturbed. The flower stems appear first, leaves coming later. This also succeeds well in large pots in cool greenhouse.

Bugloss.—Fine showy perennial, with large blue flowers. Propagate by slips and divisions of roots when flowering is over, or sow seed in warm border in spring.

Calceolaria.—These are of two kinds: herbaceous, for exhibition; and shrubby, for bedding out. The former kind are propagated by seed sown in May under glass, and require to be shifted as they grow. The flowers have, through cultivation, attained an enormous size and great richness and variety, while the latter produces clusters of small flowers, very effective when massed.

Shrubby calceolarias are propagated by cutting. To do this take the cuttings in September or early in October, and having prepared a piece of ground in a north border, the soil of which must be well drained, and made light with a large admixture of sand; place the cuttings in and press the earth well round them, water them well, and cover with a hand-glass;

or place the cuttings in pots, and having sunk them in a north border, under a wall, place a hand-glass or small frame over them. In this way they may be kept without further attention till the following spring, unless the weather should be very frosty, in which case it may be well to throw some covering over the hand-glass. In the spring the cuttings should be re-potted, and will soon become fine plants. It is to be observed that the state of atmospheric influence most favourable to all cuttings is when a change to moist growing weather succeeds, within two or three days, the dry weather during which the cuttings have been taken.

During winter, calceolarias must be protected from the frost by a covering of mats or straw. They will require very little water from November to the middle of February. About this period they will begin to grow rapidly, and may either be potted or kept as cool as possible in the pit, and transferred to a south aspect in the flower garden in May. Calceolarias flower from June to September. Spring struck cuttings do not flower so well as those taken in autumn.

Campanulas.—These are very pretty, and comprise many varieties of hardy annuals, perennials, etc., of various heights. Campanula Fragilis, Bell Flower is, used largely for hanging baskets.

Candytuft.—The candytuft, or Iberis, as it is also called, springs up readily from seed sown in any light rich soil. Autumn is the best time for sowing.

The improved varieties of this favourite flower now offered by florists and seedsmen are exceedingly beautiful, and it may be questioned if any more effective annuals can be selected; they succeed in any soil. For the names of varieties the reader should consult the lists of the large growers.

Carnation, Clove, Picotee and Pink.—These flowers, which should be found in every garden, belong to one family. The chief distinction between the carnation and the picotee is that the colour of the former is disposed in unequal stripes going from the centre to the outer edge; that of the picotee

is disposed on the outer edges of the petals, radiating inwards, and uniformly disposed. Carnations are classified as Sells, Flakes, and Bizarres. Sells are carnations of one colour only, without marks, and without shading. Flakes are those which have the ground colour, be it what it may, striped with one colour only. Bizarres are those which have the ground marked and flaked with two or three colours. The edges of the petals of the carnation are smooth, those of the pink are generally jagged or notched. The pink, for the most part, has a dark eye, and sometimes a zone of the same colour as the eye midway between the base of the petal and the edge. The clove has a larger blossom of a deep red colour, and emits a pungent and delicious odour. Carnations, cloves, picotees, and pinks are propagated by seeds, layers, and cuttings.

Sow the seeds in May, in pots or small boxes, using well-manured soft loam. Place them in a sheltered part of the garden, and when the plants show five or six leaves, transfer them to beds of rich soil, mixed with a little sand, placing them about six inches apart. They will bloom the second year. Isolated plants generally require the support of a stick.

The season for propagating by layers is in July and August. The *modus operandi* may be described as follows:—Having selected the shoots to be layered, and prepared pegs for pegging them down and made a small trench in the soil for their reception, add a little sand where the layers are to be placed, working it into the soil. Prepare each shoot by trimming off all the leaves with a sharp knife, except 5 or 6 inches at the top; then, with a thin-bladed knife, make an incision half through the shoot with an upward cut, beginning below a joint and passing it through it for about an inch or so. Bend the layer down into the sandy soil prepared for it, pegging it down in that situation in such a manner as to keep the slit or tongue open, and cover it with a rich light compost. Two days afterwards, when the wound is healed, a gentle watering will be beneficial.

Cuttings are made by taking off shoots which cannot be conveniently

layered, cutting them right through a joint with an oblique angular cut, and planting them in pots or beds prepared with mixed compost and sand.

Piping consists in drawing out the young shoots from the joints and inserting them into a light sandy soil. It is more applicable to pinks than to carnations.

Canary Creeper.—The seeds may be sown at the end of March, or in April, in the open air, and not of necessity in a south aspect. This creeper is hardy, and has even been known to grow with the utmost luxuriance in a shady northern aspect.

Canterbury Bell.—This beautiful biennial is exceedingly hardy, and characterized by the profusion and duration of its bloom. If the flowers are picked as soon as they fade the plant will keep blooming for a considerable period.

Christmas Rose.—This is a hardy, herbaceous perennial, producing a pure white flower in the depths of winter. It is propagated by division or roots and by seed, and thrives in any ordinary soil, preferring a shady situation.

Chrysanthemum.—This hardy, herbaceous perennial, among the hardiest of the hardy, and therefore well fitted for the garden of the amateur, flowers from October to December, and does well in any situation, north, south, east, or west, provided the soil is fairly good. Preference should be given by the amateur to the early flowering varieties. They are always more satisfactory than the late kinds, which are very often spoilt by the frost before they have been long in bloom.

Speaking broadly, chrysanthemums are classified as Japanese, reflexed, incurved, pompons, anemones, and anemone pompons.

The distinction between each class is easily recognized. The Japanese variety is marked by its irregularity, its petals being, as it were, tossed about in every direction. Reflexed chrysanthemums are those whose petals are bent back and turn downwards towards the flower stalks. In the incurved varieties the arrangement of the petals is just the reverse, the petals turning upwards and away from the flower

stalk, and curving inwards. Pompons are varieties that do not attain the height of the tall, large-flowering chrysanthemums, and whose blooms are smaller, say about the size of a half-crown, or not larger than a crown piece. The anemone-flowered varieties differ from all the others, in having a centre of close petals, almost like a sunflower, but still more like an anemone, surrounded by a fringe of edging of large loose petals. The anemone pompons are merely dwarf varieties of the anemones.

The favourite mode of increase by the best cultivators is by cuttings. No plant strikes so easily as the chrysanthemum. In any soil, at any season, put a growing branch in any place where it does not freeze or scorch, and it is almost sure to root. Some cultivators recommend November as the best time for striking cuttings, etc.; some succeed admirably by inserting them in May. Perhaps it is better to make a compromise between the two extremes by striking cuttings in March. These should be well rooted, and then potted off in April, and receive their first shift into pots 4 inches or 4½ inches across the top, the first week in May. They should then be continued in a temperature of 50° for a fortnight, headed and hardened off, and stood out of doors by the end of May, and receive their final shift a month or six weeks later.

Chrysanthemums left out of doors entirely, should be cut down after flowering.

Cineraria.—Greenhouse perennial. Chiefly used for greenhouse decoration, magnificent star-shaped blooms, useful pot plant, but will not stand the frost.

Clematis.—The most ordinary type is the hedge-plant indigenous to Britain, called "Traveller's Joy," on which the more delicate hybrid varieties are frequently grafted. They are otherwise propagated by cuttings taken from side shoots and placed under a hand light in summer, or by division of the roots. Among the best of the hybrid varieties may be named *C. Jackmanni*, with large purple flowers, and *C. Jackmanni Alba*, with equally large white flowers.

Columbine, or *Aquilegia*.—A pretty hardy herbaceous perennial, of which many beautiful hybrid varieties have been recently introduced. Seeds should be sown in March in any ordinary soil.

Convolvulus.—Hardy annuals and half hardy. Excellent for clumps, bedding, etc. The climbing varieties are greatly admired and used for covering trellis work, summer houses, etc. Will grow and flower freely in all soils and situations.

Crocus.—The most popular crocuses are white, yellow, blue and purple; the striped ones exhibit these colours in every variety. They flower from February to March.

Nothing can be more easy than their culture. They are usually increased by offsets, which are planted in October or November in light soil; they bloom the second year. Crocuses are very accommodating in reference to the depth at which they are planted; from 4 to 6 inches is, perhaps, the best average. As the young bulbs are formed on the top of the old ones, they thus possess a self-elevating power. Crocuses will flower freely for many years without being disturbed; the best growers, however, recommend dividing and replanting every third or fifth year. To secure perfect blooms, the foliage must be left to die down of its own accord.

Dahlia.—Dahlias are best multiplied by dividing the tuber, every eye, when separated with a portion of the tuber, making a plant. Cuttings can also be taken, but they take longer to root than tubers. They require a dry and airy situation, and should have a clear space of about 2 feet all round. When the green stalks have withered and died down with the frost, lift the tubers and keep them dry during the winter. These well known half hardy perennials have during the last few years been greatly improved, and some of the cactus varieties are exceedingly striking. In spring tubers should be placed over a hotbed, and as soon as shoots are large they should be cut off and struck singly in small pots. Another method is by cutting up the tubers with the eyes and planting out direct early in May.

Daisy.—This fibrous-rooted plant,

propagated by division as well as by seed, is extremely suitable for edgings. It grows very freely, and should be thinned out every spring or the flowers will deteriorate. It is very hardy, and grows in almost any soil.

Foxglove, or *Digitalis*, is a hardy perennial, of easy culture. It will thrive in almost any soil or situation. The white variety is more highly prized and better suited for gardens than the commoner red variety. It is raised from seed.

Fuchsia.—Fuchsias will grow in almost any soil. Ordinary loam and leaf mould in equal proportions, with some broken charcoal and sand, does very well. Feeding with manure water is better than mixing manure with the soil. The varieties flower between June and October.

Plants that have been at rest during the winter may be started in January, and large early-flowering specimens produced by cutting down the old plants and shaking the roots out of the old soil as soon as they have begun to grow, re-potting them in good, rich compost, with sufficient drainage. Strike cuttings for bedding plants as soon as the shoots are long enough.

Cuttings should be inserted in pots filled either with loam and leafmould, or peat and silver sand, in equal parts, to within an inch and a half of the top. Place over this three-quarters of an inch of silver sand, and level the surface to make it firm; then insert the cuttings—about 1 inch long is the proper length—and plunge the pots in a bottom heat of 60°, either in a pit or propagating house; if the latter, cover them with a bell-glass. In three weeks they may be potted into 3-inch pots, and re-plunged in the same bed, keeping them at a temperature of from 50° to 60°. As soon as the roots reach the sides of the pots, the plants should be shifted into fresh pots, until they receive their final shift into 6, 9, or 12-inch pots, towards the end of June. The size of the pot must be regulated by the period when they are wanted to bloom. If in July a 6 or 9-inch pot will suffice; if in September or October, a 12-inch will not be too large.

During the period of growth, the plants will require stopping at least six

times, care being taken never to stop the shoots immediately preceding or directly after the operation of shifting into larger pots. If the pyramidal form of growth, which is the best of all forms for the fuchsia, is adopted, the plants, from the first, must be trained to a single stem, and all the side shoots stopped, to make the pyramid thick and perfect. If the bush form is wanted, the whole of the shoots should then be stopped at every third joint, until branches enough are secured to form the bush, and then be trained into the desired shape.

A regular moist, genial temperature must be maintained during the entire period of growth, never exceeding 60° by fire heat. During bright sunshine, the glass should be slightly shaded with thin gauze; the delicate leaves are easily injured, and the plant should never receive the slightest check by being allowed to flag. Constantly pick the seeds off while in bloom. They will then continue blossoming for two or three months.

Many varieties of the fuchsias are hardy, and will stand our winters in the open ground, especially in a well-drained, light soil, having a large proportion of peat in it. Cover the whole fuchsia beds with 3 or 4 inches of dry cinder ash at the first approach of frost. The dead branches should not be cut off, nor should the ashes be removed until the fuchsias begin to shoot in the spring.

Gentiana.—All the gentians are beautiful. *Gentiana acaulis*, with its large deep mazarine-blue blossoms, looks well as an edging plant, and flowers from June or July to August. It requires a pure air and rich, light soil. They are propagated by seeds sown when ripe, and by division of the roots. The seeds should be sown in fine loam mixed with sand, and should not be too deeply covered. If sprinkled on the surface of the compost, and a little mould strewn over the seeds when sown, it will be sufficient. The seeds are very long in germinating. They require no bottom heat or protection beyond the exclusion of frost. The gentians are impatient of root-division, and indeed of transplanting, and when once established in any

position the plants should be allowed to remain where they are. *Gentiana acaulis*, or *Gentianella*, is less liable to suffer from division of the roots than other varieties, but even with this it is best to plant out seedlings.

Geranium.—It is desirable that cuttings of all sorts of geraniums for bedding the following year should be struck early; from the last week in July to the end of the first week in August is a very good time. They should be taken in dry weather, when the parent plant has had no water for some days, and they should be kept dry twenty-four hours after they have been prepared for potting. The more succulent sorts, and any that appear difficult to strike, may with advantage be touched at the end with a small paint brush dipped in collodion, which will serve to hasten the callus which the cutting must form before it will throw out roots. They may be potted four or six in a pot, according to size. It is essential that the pots be well fitted with drainers, that the soil be light and sandy, and that it be pressed tight around the joint of the cuttings, which should be buried in it as flat as possible. When potted, they may be sunk in the ground on a south border, and well watered in the evening when the sun is off. They will require no shading, except the sun be very scorching; and, in this case, they must not be kept from the light, but merely screened from the scorching rays of the sun.

To preserve old plants during the winter, take them out of the borders in autumn, before they have received any injury from frost, and let this be done on a dry day. Shake off all the earth from their roots, and suspend them, with their heads downwards, in a cellar or dark room, where they will be free from frost. The leaves and shoots will become yellow and sickly; but when potted about the end of May, and exposed to a gentle heat, they will recover and vegetate luxuriously. The old plants, stripped of their leaves, may also be packed closely in sand; and in this way, if kept free from frost, they will shoot out from the roots, and may be re-potted in the spring.

Gladiolus.—Gladioli are divided into two sections: viz.,—the early-flowering

and the late-flowering varieties. The early-flowering varieties, of which *Gladiolus Colvillei* and the Bride may be taken as examples, bloom from the beginning of June to the end of July, but may be induced to flower earlier under glass. These should be planted in October, or at the latest in November. The late-flowering varieties bloom in August and September, and should be planted in March. The bulbs, or corms, should be lifted in October or November, and dried off. Gladioli, in common with bulbs in general, like a light rich soil, and if the ground in which they are planted is poor, or in any degree heavy, a plentiful dressing of well-rotted manure and some sand should be incorporated with it, and the bed allowed to lie three or four weeks before the bulbs are planted. A warm spot, well exposed to the sun and sheltered from cutting winds, should be selected, and when winter approaches and frosts set in it is desirable to protect beds in which early varieties have been planted by a covering or mulching of litter about 4 inches deep.

Gypsophila.—Pretty hardy annuals, suitable for mixing with cut flowers. The perennial variety, *G. Paniculata*, with its graceful panicles of small white flowers, showing to great advantage when used in this manner.

Helichrysum.—Hardy, easily grown, free flowering annuals, generally known as everlasting flowers. Sow early in April. Flowers if cut before blooms fully open will last a long time; very suitable for winter decoration.

Hollyhock.—Sow the seed on good soil in March or April. Weed and water. Remove young plants to nursery bed in June, carrying the earth around the roots, and water well. In autumn plant out in blooming quarters, placing them about a foot apart. Support them by stakes and cords if necessary. They will bloom the second year.

Hyacinth.—Nothing is easier than the culture of hyacinths, as they can be grown in water, in moss, pots, or open ground.

To grow them in water, place the bulbs in a hyacinth glass, and let the water just touch their base. Keep

them in a dark cool place for a few weeks. When the roots have grown 2 inches, remove the water half an inch from the base of the bulb. Do not disturb the water if it is sweet, but place a piece of charcoal in it. Expose the plant to the sun and turn the glass once a day.

To grow them in moss, place in a bowl amid damp moss and keep in a dark place for three weeks; afterwards expose to light, and keep the moss damp.

To grow them in the open ground, let the soil be loamy and well manured, with a good dash of sand or grit. Plant the bulbs about 4 inches deep in October. They will flower between January and March.

When pots are used, the crown of the bulb should not be buried. Lilies are grown in the same way.

Iris should be planted in clumps of three or more, and, if allowed to remain undisturbed, they will become more effective each succeeding year.

Lily of the Valley.—To grow lilies of the valley to perfection, the roots should be set in bunches one foot apart and covered with a dressing of well-rotted manure before the winter sets in. They can hardly be treated too liberally. They flower during March, April, and May. If grown in pots for the greenhouse, by a little management a succession may be kept in bloom till June. Keep the pots perfectly dry and in a cool, shady place until their natural season is past, when by watering they soon come into foliage and flower. In buying from growers select plants with plump crowns; if these are potted, a cluster of flowering spikes will be thrown up in each pot; after flowering they may be turned into the border, where, in all probability, they will flower the following year. Do not disturb them save to thin out, and they will appear year after year.

Larkspur, or *Delphinium*. These are annuals, biennials, and perennials, combining unusual richness with an endless variety of colour. The annuals are reproduced by seeds sown in any good garden soil in a warm border in April. The perennial, especially named varieties, are best propagated by divisions or cuttings.

Liliums.—The different kinds of lilies are so numerous that it is not possible to specify them here; but it may be said that they are, for the most part, hardy bulbous perennials, and that all require very much the same kind of culture. If the land be of an adhesive nature, it should be removed to the depth of 2 feet, and replaced by a rich, free soil. Light or medium soils will only require digging and well working. Plant the bulbs 5 inches deep, and for the first winter place on the surface a few dry leaves. The bulbs should not be disturbed oftener than once in three years, as established patches bloom much more profusely than those taken up and divided annually. Any florists' catalogue will give a list of the hardiest kinds which are most suited for out of doors in this climate.

Lobelia.—All the varieties grow freely from seed, and most of them from cuttings.

Marigold. Sow seeds in March and April. Half hardy annuals, but easily grown from seed. Their showy colours and free flowering habit making them very desirable for general use in ordinary soils.

Mignonette.—Hardy annual. Easily grown from seed, should be thinned out well to give large bloom. Very sweet scented.

Mimulus.—A genus of extremely handsome profuse-flowering plants. Seeds sown in spring make fine bedding plants for summer blooming.

Narcissus, including *Daffodils* and *Jonquils*. These are hardy bulbs, and may be left in the ground for years without any injury.

Pansy or *Heartsease*.—Pansies are of two kinds—the English or show variety, and the Belgian, or fancy variety. The difference between a show and a fancy pansy lies in the "blotch," or patch of colour immediately in the vicinity of, and proceeding from, the eye, as it were, this being small in the former and large in the latter—the larger, indeed, the better. Any ordinary soil will do for these hardy plants. They flower from March to June.

Pansies require little attention during the autumn months. Indeed, those not intended for propagation

may be dug up as soon as flowering is over. The choicer varieties must be taken care of in order that their roots may be divided or cuttings taken from them in April or May, for it is only by such annual renewal that degeneration can be prevented. Propagation by cuttings or division of roots may take place any time from April to the end of October, although August and September are the best months for the work. The young shoots that spring from the base of the plant make the best cuttings; those that have flowered have generally hollow stems; these do not root so freely, and should not be used unless the variety is extra good or scarce. Cuttings should be taken off just below a joint, with a sharp knife, and inserted in soil well mixed with sand. The hardy kinds winter well in the open, though the best sorts should be removed to cold frames. Pansies increase very rapidly, and bloom for a long period.

Peas (Sweet).—These hardy annuals have during the past few years been greatly improved, and comprise endless varieties. Their delightful fragrance, choice colours and all-round excellence justifies their popularity. Sow thinly any time between February and May in well-trenched ground, in well-manured soil, or sow singly in pots and plant out when large enough, care being taken not to disturb the roots. Give support as soon as they are tall enough, twiggy sticks being placed in ground between the plants, and well water during hot weather.

Petunia.—There is very little difficulty in the culture of this half-hardy soft-wooded plant, which may be propagated from seeds sown in the spring, and treated in precisely the same manner as a half-hardy annual; or it may be grown from cuttings struck in gentle heat in early spring, or without heat in August or September.

Phlox succeed best in light, rich soil, and are propagated by seeds in the case of annuals, and by cuttings and division of roots for perennials.

Polyanthus.—This plant does well anywhere save in a north aspect. It flowers from March to June, and is propagated by division of roots in August, in good rich loam. Unless

the plants are divided up after flowering, they will soon deteriorate.

Poppies are some of the most easily grown, and at the same time the most effective, of garden flowers. Brilliant and varied in their colouring, they look well either singly or in clumps. They are grown from seed; and any florist will advise as to the best sorts for the situation desired.

Pyrethrum. (Golden Feather).—Invaluable for beds and borders, the golden foliage showing to advantage when mixed with other flowers.

The perennial varieties with aster like flowers (double) and marguerite variety (single) are also much admired and cultivated.

Rose.—Taking height only into consideration, worked roses—that is to say, roses budded on stems or stocks—are distinguished as standards, half standards, dwarf standards, and dwarfs. Of these, standards are on stems from 2½ to 4 feet from the ground to the budding; half standards from 1½ to 2½ feet; dwarf standards, from 1 foot to 1½ feet; while dwarfs are worked close to or beneath the surface, and form vigorous bushes for winter planting. In addition to these forms there are climbing roses, whose habit is obvious from the name they bear. The season for planting may be any time from the fall of the leaf till the bud again begin to swell, in April or the beginning of May. After that there is danger of the tree dying off.

Having selected the sorts of roses suited for our purpose, and of one or two seasons' growth from budding, and having cut off with a sharp knife all damaged root fibres, we proceed to plant. Good ordinary garden soil will produce a rose large enough for ordinary purposes; but to grow it in perfection, unless a bed has been previously prepared, a hole in the ground should be opened two feet square and a foot deep. This station should be filled with a compost consisting of two good-sized spadefuls of thoroughly rotted dung for each plant, mixing it well with the soil. Upon the soil thus prepared the standard rose is placed, the collar just above the level of the surface, and the fibres carefully spread out over the soil. Fill in the remaining

soil and replace the turf, treading it gently until it forms a small mound, out of the centre of which the tree rises. A stake is now driven into the ground, near enough to support the stem, which is tied to it.

The dog-rose is the stock usually selected for budding upon. These stocks should be planted in October or November. About July or August of the following year they will be ready for the operation.

Budding consists in removing an embryo bud and a piece of bark from a rose-tree which it is desirable to propagate, to the stem of a stock, by making on the latter a T-shaped cut through the bark, slipping the piece of bark or "shield" within the cut, and binding the whole with worsted thread, leaving the eye of the bud visible. From this bud will grow the future plant, bearing a flower similar to that of the parent tree. The wound on the parent should be plastered with clay.

Most roses may be propagated by cuttings; but all are not calculated for this method, bottom heat being indispensable for the more tender varieties. Summer and autumn are the best seasons for cuttings. The shoot made in spring is taken with a small portion of last year's wood attached, and cut into lengths of five or six inches, selecting such as have two lateral shoots with five or six leaves to each. An inch of the old wood should be inserted in the soil, leaving at least two leaves above. From four to six of these cuttings may be placed round the inside of a small 3-inch pot, in soil consisting of equal parts of leaf mould, turfy loam, chopped fine, and silver sand, watering them well with a fine rose, to settle the earth round the stems. When the water is drained off and the leaves dry, remove to a cold frame or place under hand-glasses, shade them from the sun, and sprinkle them daily for a fortnight. If threatened with damping off, give air and sun. In a fortnight the stems will have formed a cullus. At this time they are greatly benefited by bottom heat; they root more rapidly, and may soon be shifted singly into 3-inch pots, and removed back to the

cold frame, in which they should be kept till spring.

Some roses push their roots in a lateral direction under ground, and throw up young shoots or suckers from them. These suckers, separated from the parent plant by the cut of a sharp spade, form flowering plants the same season, if separated in the spring and transplanted to suitable soil. When a rose-tree is shy with its suckers, it may be stimulated by heaping earth round the roots.

In pruning newly-planted roses, if there be only one shoot from the bud, cut it down to two eyes: if there be a regular head formed, cut away every shoot down to the lowest eye that points outward or downward, and cut away all weak shoots or thin ones that come in the way of a better, back to their base, leaving only such as are required to form the head of the tree. When the buds begin to break, rub off all that grow inwards, all that would cross other branches, all that are coming weakly, and all that would crowd the head and destroy its cup-like form.

It is not a good practice to prune roses immediately after planting them. The tops should be left on for a month or six weeks, and then cut back or headed into three or four buds from the stock. This will ensure a healthy, vigorous growth. After the plants are established, the shoots may vary in length from 4 to 16 inches. The weaker the growth, the closer should they be pruned, and vice versa.

Roses.—Classification of a few favourite varieties:—

Hybrid Perpetua, blooming from June till November, Baroness Rothschild, Black Prince, Charles Lefebvre Clio, Duke of Edinburgh, Dupuy, Jamain, Frau Karl Druschki, General Jacqueminot, Jeannie Dickson, Margaret Dickson, Mrs. John Laing, Prince Camille de Rohan, Xavier Olibo, and many others.

Favourite Tea Scented: Belle Lyonnaise, Bouquet d'Or, Gloire de Dijon, Madame Hoste, Gloire Lyonnaise; Noisette Roses, Marechal Niel, Madame Carnot, W. A. Richardson. There are many other varieties, for names of which see any good nurseryman's catalogue.

Salpiglossis.—Charming half-hardy annuals, very effective, various colours, the vein-like markings of the inner petals being very striking.

Scabious. (Pin Cushion Flowers).—Most delightful hardy biennials and perennials of various colours. The biennials flowering the same year if sown early in the spring. Very useful as cut flowers.

Snapdragon, or *Antirrhinum*, is a very hardy, and at the same time a showy, border plant. Amongst the more recently improved varieties of this valuable genus are large finely-shaped flowers of the most brilliant colouring. They succeed in any good garden soil. The smaller kinds are valuable for rockwork and old walls. Plants yielding blossoms of all sorts of colours may be obtained from a single packet of seeds.

Snowdrop.—This is one of the most elegant and interesting of spring flowers; it may be had in bloom indoors at a very early period, its white blossoms contrasting beautifully with the rich hue of the crocus, etc. A row of snowdrops shows effectively in juxtaposition with a row of blue crocuses. October is the best month for procuring and planting them, although they may be inserted much later. There are many varieties of this beautiful bulb, but *Elwesii*, or *Giant Snowdrop*, is most effective and valuable for pot culture indoors.

Statice. (Sea Lavender).—Very fine hardy annuals. The graceful sprays with its panicles of small white flowers make it quite distinct when mixed with bouquets. Cut and dried they are very effective for winter decoration.

Stock.—These comprise half-hardy annuals, annuals, perennials, and biennials, but most are annuals. They are propagated by seed sown in March or April, and all thrive best in a rich, and not too dry, soil. The double ten week stock are well known for their beautiful display.

Sweet-william.—These thrive in any good garden soil, and are propagated by seeds, though usually by layers and cuttings from the parent plant. They are splendid, free-flowering plants, and are general favourites.

Tulips.—These beautiful flowers are

raised from bulbs planted in October or November, in rich, loamy soil, and placed three to five inches deep, and six inches apart. During frosts they should be protected by mats or other shelter. When they begin to appear the ground should be loosened and pressed closely around the stems. They are in flower in April and May, and should be taken up as soon as the leaves have dried off, and put in paper bags with the soil adhering. In October rub off the offsets. Place these apart from the old bulbs.

Tobacco Plants, or *Nicotiana*, are raised from seeds sown in gentle heat early in the year, and may be placed out in the open ground in June. Although treated as annuals, they are perennials, and after they are cut off by the first frost, if the roots remaining in the ground are protected by a covering of ashes, they will come up again year after year.

Tropaeolum, including *Nasturtiums*. A tribe of profuse-flowering and easily-cultivated climbers. They are invaluable for covering trellises, verandahs, and bowers, while for bedding purposes they are excellent, especially the dwarf varieties. They grow rapidly, are easily trained, and continue flowering the whole summer and autumn. Grow from seed.

Verbena.—This is a useful bedding plant, easily cultivated. They are propagated by seeds and cuttings. The best mode is by cuttings, which should be taken in spring. The usual practice is to cut part of a branch level across at the base of a leaf or pair of leaves, remove the leaves, and place the thick end of the cutting in leaf mould dressed with sand.

The *vervains* rank among the *verbenas*.

Violets.—Violets are best grown in loam and leaf mould. The true violet flowers in March and April, and should be propagated by division in May, but *Russian*, and sometimes *Neapolitan*, will flower all the winter. Propagate the latter in June, by dividing roots up into single crowns, and planting them nine inches apart on a piece of ground with an eastern aspect. Pinch off runners, and keep the beds free from weeds.

To grow the Russian violet, plant roots under a wall in a warm aspect in April. The soil should be light but rich, and have a quantity of sand four inches below the surface. The pansy belongs to the viola family, but flowers later and longer.

Virginia Creeper.—This is a plant of very rapid growth, producing an abundance of beautiful leaves, which in autumn assume varied and gorgeous hues. It grows best in a fairly rich soil. Propagate in autumn or spring by cuttings or layers. Well-grown plants attain very great heights. The favourite variety is the Veitchii.

Virginia Stock.—This is a pretty little annual, which may be sown at almost any period of the year. It grows six inches high and produces red and white flowers, suitable for edgings. Pick off the seed, and water well, and the plant may be kept in flower the whole summer.

Viscaria.—This is a pretty little annual, suitable for borders. *Viscaria oculata* grows nine inches high, produces pink flower with dark eye; *V. o. nana coccinea* grows nine inches high, produces scarlet flower with dark eye; and *V. Damietta* reaches twelve inches, and has white flower with dark eye.

Wallflowers are raised from seed sown in a south-east or west aspect, on a sandy loam, early in spring. They will flower the following year. The double varieties are propagated by cuttings taken in the autumn after flowering is over. No garden should be without these hardy, sweet-smelling flowers, which are in bloom from March to September.

Wistaria.—Hardy climbers, very free growers, and highly ornamental. The foliage somewhat resembles that of the ash, and the long pendules of white or purple blossom closely resemble the flowers of the laburnum in form. The best known is *Wistaria sinensis*. Plant layers or cuttings in June or July in any good soil. The following spring they can be removed to the place intended for their permanent situation.

Zinnias.—Valuable half-hardy annuals. Seed should be sown in March or early April. Varied colours.

Flowers remaining in bloom for a long time.

Rockeries.—Few ornaments of a garden have a better effect than rock-work properly disposed; while at the same time it is also very useful. By means of it, an ugly corner may often be turned to very good account, and many plants will be found to flourish and do well upon rock-work, which can hardly be kept alive elsewhere. In a general way, any material that comes most readily to hand may be used for rock-work, which is intended to be covered with plants. The flint stones from chalk and marl pits, where they can be had, form excellent rock-work; and so, of course, do the different spars of Devonshire and Derbyshire. As a general rule, rock-work should never be raised on grass, but on gravel, or on a concrete foundation. It is also well placed around a pond or water-tank. In the centre of a square gravelled plot, a tall piece of rock-work is very effective.

The spring of the year is the best season for making rock-work, since the soil will have time to settle, and the stones to become fixed in their position before the next winter's frost. Almost every county in England has some material natural to it, from which rock-work can be formed—even the larger stones of the gravel-pits may be used for this purpose; and, in the absence of anything else, blistered clay from the brickyards, and clinkers from the smith's furnaces, are not to be rejected. The sea-shore also, all along the coast, affords plenty of material, out of which a little taste and good judgment will soon arrange something both agreeable to the eye, and useful as a bed for many different classes of plants.

On the piece of rock-work, which has just been described, may be planted almost every variety of hardy or half-hardy creepers, creeping jenny, canariensis, periwinkle arabis, etc.; while lower down between the stones, cistuses, saxifrages, alyssums, and sedums (or stonecrops) may be grown. Much, of course, depends on the situation of the rockery. For a sunny rockery, a large number of flowering plants are available, such as phlox, snapdragon,

campanulas, asters, irises, lychnis, mimulus, columbines, anemones, etc., but nothing is more effective in a cool aspect than a rockery that is a mass of ferns. These are easy of cultivation, and if let alone, and given a sufficiency of water in dry weather, only improve as time goes on.

The Fernery.—The outdoor fernery must be stocked exclusively with hardy British and exotic ferns. Of these, none will bear the light and heat of the summer sun in full force, and a situation should be chosen for it which is shady and near water, or in which water can be applied by artificial means. But it must not be supposed that any moist, dark spot will do for ferns; on the contrary, they like good drainage as well as shade and moisture, and efficient drainage should always be provided. The moisture in which they most delight is a humid atmosphere and a moisture created by artificial means, and consisting of drips and splashes that fall in almost infinitesimal quantities on the fronds, and sustain their verdure unimpaired.

A shady bank, or cool spot on the edge of a pond or the brink of a rivulet, is a good position for an out-door fernery. Failing such positions in gardens and backyards, the best must be done by artificial means, and, even under such conditions, a fernery that is satisfactory to the eye and suitable for the plants that are to be placed in it, is by no means difficult to attain or troublesome to manage, provided that the primary requisites—coolness, shade, and moisture—are obtainable.

In making a piece of rock-work for ferns, or otherwise *building* a fernery, so to speak, supposing that the work is done on the level, or a little below the level of the ground, as may be the case when the upper part of the soil is removed to furnish part of the material for the structure, the first thing to be done is to provide a thorough drainage below the surface by excavating, and filling up the hollow thus formed with brickbats, stones, and other materials which lie together in such a manner as to have interstices of various sizes between them, and thus afford ample room for the escape of moisture from the structure above, and its absorption

by the soil below. If economy with regard to soil is necessary, a heap of the same material may be thrown up on which to place the compost in which ferns will best thrive, which may be made of good garden soil mixed with leaf-mould, some good loam, and a fair proportion of light, fibrous peat, and sand. Then on the surface of the bank thus formed, place stones of various kinds, some on the soil itself, and others half buried in it, with roots of old trees, flints, clinkers, etc., disposed so as to leave crevices here and there in which the ferns may be planted.

The fernery, or rockery, being ready for the reception of the plants, put the roots into the crevices provided for them, keeping the crown just above the soil, and pressing the earth firmly about the roots. Some ferns require a greater depth of soil than others, and some again, such as the common Polypody and Hart's-tongue fern, will grow admirably on a wall, which shows that they require but a minimum of soil in which to root. In planting ferns, the taller sorts should be placed at the back of the bank, those of medium height in the centre, and the dwarf varieties in front.

Window Gardening.—Of the plants suitable for various aspects, little need be said; the difference is not so great as might be imagined; but it may be taken as a rule that a sunny aspect is best for all flowering plants, except in the hot summer months, when they last much longer in bloom if kept in the shade. It is possible, however, to have blinds fixed to a south window, by which the plants may be shaded, or not, at pleasure. In the culture of some plants—the auricula, for instance—it is advisable to give them a sunny aspect from October to May, and a shady one from May to October. Other plants—such as ferns—may be constantly kept in the shade, although a *little* sun does them no harm, rather the contrary.

Much more depends on the choice of soils in the cultivation of pot plants than is usually imagined. A few grim, sooty plants may occasionally be seen occupying a window ledge, and their appearance ascribed to the smoky atmosphere. This is, in fact, the case

to a certain extent, but not wholly so; they are mostly potted in soil taken from the back yard, impregnated with foul gases, so that plants would not grow in it in the remotest part of the country. In towns, where proper soil can scarcely be met with, it is advisable to purchase it at some suburban nursery, stating the sort of plant for which it is required.

All soft-wooded plants, such as geraniums, fuchsias, cinerarias, etc., do best in a soil composed of two parts yellow loam, one very rotten dung, one leaf mould, with sand enough to make it porous; but some plants, such as ericas and azaleas, require peat. Although the first-named soil will grow almost any plant, still those that require peat must have it, as no substitute will produce the same effects.

In potting, adapt the pots to the size of the plants as near as possible—or rather, to what the plant is expected to be, as allowance must be made for growth of the roots as well as the plant. Let the pots be perfectly clean. Effectual drainage of the pots does not consist so much in the quantity of drainage as in the arrangement of it. A potsherd should be placed over the hole; some pieces of pot, broken rather small, over that; and these again covered with a layer of peat fibre or rough earth. This gives efficient drainage, and need not occupy more than an inch and a half of the pot. Hard-wooded plants should be potted firmly; soft-wooded should be left rather loose and free.

Another feature in window gardening is the introduction of suspended baskets, usually made of wire, for the purpose of displaying to advantage the beautiful habits of trailing plants. These should be potted in ordinary flower-pots, and surrounded with moss in the basket, the latter being made to hook on to a support in the ceiling, so that it may be temporarily removed when the plant requires water. One of the most suitable plants for the purpose is *Saxifraga Sarmientosa*, otherwise known

as "Mother-o'-Thousands." Other trailing plants that may be grown successfully in hanging baskets are fuchsias, ivy-leaved geraniums, petunias, verbenas, common musk, Harrison's giant musk; also the trailing snapdragon or toadflax, campanula and Creeping Jenny. Many ferns likewise lend themselves admirably to this treatment.

Palms.—The majority of palms in common use are fairly hardy, and with a little care may be grown successfully. During the winter they require some special attention. If they are in a cold greenhouse they require but little watering during the winter; but if in a warm room, or a dry atmosphere, they will need to be watered about once a week.

Whenever practicable, remove them from the room when the gas is lighted. Always take care to avoid any sudden change of temperature.

The leaves of the palm, should be frequently syringed or sponged on both sides with water with the chill just taken off. The foliage of house plants so soon gets covered with dust, and every endeavour should be made to remove this, as nothing tends to give them a more sickly appearance. Any leaves that turn brown should be at once cut off.

Palms require good drainage; therefore do not allow them to stand in water in an ornamental pot.

Either or all of the following palms will be found extremely serviceable in a cool greenhouse. They are easily grown, and inexpensive. *Latania Borbonica*, *Chamærops Fortunei*, *Seaworthia elegans*, *Coryphia Australis*, *Phoenix dactylifera* (the date palm), and *Sabal Adansoniana*.

Aspidistra are now very popular for window decoration. They are hardy and will stand the fumes of gas, etc., very well. They need watering only three times a week or less in the summer, and once a week or less in the winter. The best method of watering is to plunge the pot in water up to the rim, but the plant should on no account be kept too damp:

HISTORICAL EVENTS

- 54 B.C. Julius Caesar invaded Britain.
- A.D.
61. Boadicea.
597. St. Augustine introduced Christianity into England.
827. Egbert became King of England.
871. King Alfred the Great.
1017. Canute became King.
1042. End of Danish rule in England. Saxon line restored, and Edward the Confessor proclaimed King.
1066. William of Normandy conquered England, and, as William I, was the first Norman King.
1154. Henry II (first of the Plantagenets) King of England.
1172. Ireland captured by Henry II.
1215. Magna Charta.
1265. Leicester established the first House of Commons.
1283. Wales was united to England.
1399. Henry IV (first ruler of the House of Lancaster) succeeded to the throne.
1455. Wars of the Roses commenced.
1461. Edward IV (first Sovereign of House of York).
1474. Caxton introduced printing.
1485. Henry VII (first of the House of Tudor).
1519. The Reformation.
1588. England defeated the Armada.
1603. James I (first of the Stuart line) succeeded to the throne.
1605. Guy Fawkes attempted to blow up Parliament by gunpowder.
1649. Charles I beheaded and, the Commonwealth proclaimed. Cromwell voted Protector.
1660. The Restoration.
1665. Great Plague of London.
1666. The Great Fire of London. 13,000 houses and 89 churches were destroyed by fire.
1688. The Revolution. James fled from the country and William of Orange took the throne.
1704. The Duke of Marlborough captured Gibraltar from the French.
1707. Scotland united with England under the title Great Britain.
1714. George I (first Sovereign of the House of Brunswick).
- 1756-1763. The Seven Years' War. England captured India and Canada.
1776. United States Independence.
1780. The French Revolution caused War between England and France.
1798. Lord Nelson defeated the French at the Battle of the Nile.
1805. England victorious at the Battle of Trafalgar. Lord Nelson died.
1815. Napoleon defeated by the Duke of Wellington at the Battle of Waterloo.
1820. George III died, having reigned 59 years.
1825. The first Railway.
1832. The first Electric Telegraph.
1834. Death of George IV.
1837. Death of William IV, and succession of Queen Victoria.
1854. Commencement of the Crimean War.
1857. Indian Mutiny.
1861. Death of Prince Consort, at Windsor, December 14.
1861. Duty on newspapers repealed.
1865. Fenian Conspiracy.
1866. Cable between England and America completed.
1867. The Reform Bill passed.
1867. Fenian Conspiracies and Arrests.
1867. Expedition to Abyssinia.
1869. Irish Church Disestablished.
1872. Voting by ballot adopted.
1872. War with Ashantees concluded.
1876. Queen adopted the title "Empress of India."

1878-80. Afghan War.
 1878-80. Zulu War.
 1881. South African War.
 1881. Phoenix Park Murders.
 1882-85. Soudan War.
 1888. Frontier attacks in India.
 1892. Duke of Clarence died.
 1892. Matabele War.
 1894. Behring Sea Fisheries settled.
 1895. Chitral campaign.
 1896. Jameson Raid.
 1898. Battle of Omdurman.

1899-1902. The Boer War.
 1900. Commonwealth of Australia.
 1901. Queen Victoria died on January 22 after a reign of 63 years 216 days.
 1902. King Edward VII crowned.
 1904-1905. Russo-Japanese War.
 1905. Anglo-Japanese Agreement.
 1910. King Edward VII died May 6th.
 1910. King George V proclaimed May 9th.

HOLIDAY-MAKING

Holiday-making is, or should be, the pleasantest task of the year. But a task it is, in the sense that forethought is necessary, the success or failure of the "change" often being in exact proportion to the degree of thoroughness with which the preliminary arrangements are undertaken. There are not wanting light-hearted enthusiasts who assure us that the ideal and only worthy way of making holiday is to take no thought for the morrow, but, suddenly waking on some sunny morning, to fling a few things into a Gladstone bag, hail a passing conveyance, and on arrival at the station—any station will do—leave the matter of destination entirely to chance. The theory may or may not be sound; in actual fact such experiences generally begin and end disastrously. In any case they are only possible to the unencumbered bachelor, and they foredoom him to such stray companionship as hotels or boarding-houses and country inns are likely to afford. To the married man, still more to the married woman, holiday-making must always be a matter of more or less anxious thought.

Properly regarded, this is not a disadvantage, but an added pleasure. Cynics are even found to aver that anticipation is in this case generally far better than realization, and that the best part of a holiday is that which is spent with guide-books and maps on some winter evening months beforehand.

Two considerations first emerge—those of time and place.

TIME

Except to the happy few, circumstances rarely permit an absolute freedom of choice, for people have a provoking way of wishing to be consulted before we absent ourselves from our accustomed haunts and duties. School authorities, too, for some reason best known to themselves, regard with horror the suggestion that any modification is possible in the cast-iron rules that govern the beginning and ending of terms.

But certainly, if business engagements and disobliging pedagogues offer no impediment, much is to be said in favour of selecting some period other than August or the early part of September. In June, for instance, there is a freshness in the country-side which the jaded townsman seeks in vain a few weeks later. The meadows are aglow with flowers; hedges and foliage are at their greenest and sweetest; there is elbow-room, and plenty of it, even at the most popular resorts; the days are nearly half as long again, and there is a moderation in the charges for accommodation so eminently refreshing as in itself to act as a tonic to the hard-set traveller of moderate means.

If June is not possible, there is a good deal to be said for July, though it is of somewhat bad repute in the matter of weather. The latter part of September, too, finds most of the amusements and facilities for excursions in full swing, and an occasional presage of coming winter in the shape of a cold

snap at nightfall only adds to the keenness of the day's enjoyment.

But if the fates ordain—as they do for most people—that August or the early part of September shall be the chosen period, forethought becomes doubly necessary, and, wherever one determines to go, the first word of advice is emphatically, *Engage your rooms or accommodation beforehand.*

ENGAGING ROOMS

There are several ways of doing this. The best and most satisfactory, unless the distance be too great, is not to rely upon correspondence but to see for oneself. The railway companies, wisely recognizing the necessity for this practice, offer every facility in the way of cheap day excursions. A day or half-day spent in looking round a place, taking stock of hotels and interviewing landladies, will generally be found in the end to have been profitably employed. If apartments have been recommended, so much the better, but individual requirements and ideas of comfort vary so much that there is nothing like personal inspection. Should a deposit be paid, be sure to get a clearly-worded receipt. If hiring a furnished house, see that an accurate inventory is prepared, or there may be claims for missing cutlery and other etceteras that you have no recollection of ever having seen.

The next consideration is that of place.

WHERE TO GO

On this important point it is difficult to give advice that shall be sufficiently definite to be of value. So much depends upon conditions of time, health, numbers and, above all, cost. We can do little more than present the alternatives.

I. Home or Abroad.—Much has been said of late as to the value of foreign travel. It affords a complete change of scene and outlook and has in many cases the advantage of relative cheapness. But *paterfamilias* should not be misled. Unless he selects the place, or places, of his sojourn with some care, and in the common phrase “knows the ropes,” he will find the reputed

cheapness of foreign resorts a delusion and a snare. Certainly for a family successfully to “live on the country” a pretty thorough knowledge of that country's language is desirable. A bachelor can flit from town to town and select accommodation according to his liking and his purse, but the family man or woman, to whom these words are primarily addressed, must perforce be more or less tethered to one spot, and he or she is decidedly at a disadvantage in native markets unless able to bargain like a native.

Assuming then that the holiday is to be spent in one's native land, the next question is—

II. Seaside or Country.—The inhabitants of Great Britain are favoured almost beyond any nation in their wide choice of seaside resorts. In a land that is “all coast,” as a contemptuous American remarked, they can seek their pleasure east, west, south, or north, with the certainty of finding marine attractions of some kind at the end of a few hours' journey. It must be confessed, however, that British seaside resorts, greatly as they have improved in many respects, have developed in the last decade or two a somewhat depressing monotony. The vaunted “pier and parade” of Sandton-on-Sea appears to the unprejudiced traveller very much like some scores of other piers and parades he has encountered. Sanitation is indisputably a matter of the highest importance, but it can hardly be denied that many of our clean-swabbed modern resorts, irreproachable in every other respect, are sadly lacking in the picturesqueness and natural charm that characterized the simple fishing villages that in many cases were their predecessors. In such matters, however, all depends upon the point of view, and there is at least this to be said, there never was a period when the life of the “sands” was more free and unconventional. However “starchy” and proper the parade, the little ones can do as they please by the water's edge, and their elders are now in most places graciously suffered to indulge in “mixed bathing” without incurring the penalty of social ostracism or a police-court prosecution.

Many who are lovers of quiet yet like to be within easy reach of "life" and entertainment. A useful piece of advice to such is to choose one of the smaller resorts that are within a tram-ride or a single station train journey of a large place. Accommodation is often cheaper, and the surroundings are probably more rural, while all the amusements and other facilities of the fully-developed town are at hand when wanted. If circumstances dictate a stay in a crowded town it is often possible to obtain the advantages of comparative quiet and cheapness by getting accommodation towards one of the extreme ends of the "front." In many places, indeed, it will be found that knowing holiday-makers deliberately avoid the "front." So much is this the case that most reasonable prices are often asked now, especially out of the season, for accommodation that a few years ago would have been considered palatial and only within the reach of very well-to-do families.

As to the attractions and benefits of a seaside holiday, they are too obvious to need consideration here. Children will almost invariably plump for the "sands," in preference to the country; and, apart from the enjoyment they so derive, there can be no doubt of the tonic effect on health of bathing and paddling and whole-hearted play. But these benefits may be dearly bought at the price of crowded lodgings, indifferently-cooked food, and the possible risk of infectious illness. Against these dangers the wise parent will take all reasonable precautions, even though some little trouble is involved.

Much is to be said—even at the risk of protest from the children—in favour of a simple country holiday. The risks attendant upon a temporary seaside residence are avoided, and provided there are fields to play in the benefit to the children's health may be just as great. And to those who love Nature and Nature's ways there can be no thought of dullness, though never a pierrot be seen. There are places—many of them—where the two forms of holiday are to be combined. "A country village by the sea" represents the ideal, and it is a

quite attainable ideal, as a little inquiry will show. The "farmhouse lodgings" advertised by railway companies are often quite good—often, too, they are quite bad. Personal recommendation or inquiry are at least as necessary in the country as at the sea.

But, of course, no man or woman can choose a holiday resort for another. Everything depends upon taste and circumstances. The best means of weighing the comparative suitability of various places is to write for a list of the well-known shilling Guide Books issued by Messrs. Ward, Lock & Co., Ltd. Having decided on one or two likely places, the reader should send for the volumes dealing with them, and he will be able to judge for himself from the views, and from the information as to fares, climate, amusements, accommodation and so on, whether he is likely to be suited.

CLIMATE

Such terms as "bracing" and "relaxing" are often used very loosely in connection with holiday resorts. There is, of course, a fairly wide range of summer climate in the British Isles, but not nearly so wide as many people imagine. In July, for instance, the average range of temperature is only about nine degrees, say from 64° Fahrenheit in the south of England to 55° in the extreme north of Scotland. As great a range can often be experienced in one town by the simple process of ascending a hill or gaining exposure to a prevailing breeze. Temperature is, of course, only one factor in the making of climate—aspect, the shelter afforded by hills or headlands, a dry or a moisture-retaining subsoil, winds, tides, rainfall—all have to be taken into account. It is not enough to assert, as some do, that because a place is on the East Coast it is necessarily bracing, or that because it is on the South Coast it is hot and relaxing, or that because it lies westward it has a high rainfall. All these statements may be true in a general sense, and yet open to many exceptions. Every place, in fact, has its own climate, and most places have more than one. It is quite common to find people averring that such and such a

place "does not agree with them," whereas their languor and want of tone are simply due to digestive derangement consequent upon sudden change of diet and mode of life. The old-fashioned advice to "take a blue pill" the first night of a holiday may be laughed at, but it is often more to the point than elaborate disquisitions on relative degrees of bracingness or the reverse.

Whenever one goes, wherever one goes, however one goes, a great source of worry is generally—

LUGGAGE

Seasoned travellers say take as little as possible. To the family holiday-maker we should be disposed to reverse the advice and say take as much as possible—within reasonable limits. Where children are of the party it is astonishing what a host of little etceteras are wanted, and what a lot of inconvenience and worry their absence may give rise to. It is little more expensive, under the "luggage in advance" system, to send half a dozen trunks than three or four, and the gain in comfort may be immense. Ladies show a growing disposition to take dresses for any and every occasion, and there is really no reason why they should not. If the luggage is sent in advance, railway companies are rather pleased to get "excess" than otherwise; and if it is taken with one a cab or carriage has to be hired for a single heavy package just as surely as for three or four. But this applies, of course,



only to a prolonged stay in one place. If a tour is in contemplation, especially on the Continent, most emphatically take as little luggage as you can.

Packing is an art which cannot be learnt from books. It is worth while to cultivate it, however. The golden rule is—heavy articles (books, boots, etc.) at the bottom, light and crushable articles at the top. It is in the "filling in" of intervening crevices and spaces that the genius of the born packer is displayed. One woman will crowd three trunks with what another will stow quite comfortably into one.

There is a prevalent form of snobbery and pretentiousness against which a mild protest may be urged in conclusion. It consists in the careful retention on one's bags and trunks of every label that has ever been affixed, as though they were a sort of medal or certificate of social superiority. Porters and our fellow-travellers may or may not be duly impressed by the juxtaposition of Grand Hotel, Cairo, with something or other Amsterdam, and something else Chicago, but as a matter of fact nearly all the luggage that goes astray on British railways does so simply and solely because the crowd of labels renders it impossible to tell to what station the package was last consigned. All who prefer the certainty of finding their luggage at the journey's end to the doubtful satisfaction of informing hotel servants and railway porters as to the extent of their travels, should *always remove old luggage labels.*

TIME

The time of day differs in every part of the world except in those places in the same degree of longitude. This is because the earth revolves on its own axis once every twenty-four hours; so, being divided into 360° of longitude, each 15° is equivalent to an hour's difference from a recognized base. Standard time is now generally adopted, that is to say, is reckoned from a given base, by degrees of longitude and each 15° East or West of Greenwich is an hour later or earlier respectively. In Canada and America the hour is reckoned locally 7½° each side of the central

meridian, and in some places to meet local exigencies an even wider margin is adopted.

There are thus naturally two days on the earth at the same time. Each day (recognizing Greenwich as a base) ends 180° West of Greenwich, (that is a point slightly East of New Zealand) and when it is 12 o'clock mid-day at Greenwich, at the meridian of 180°, a new day is starting. So, Easterly from 180° to Greenwich would be January 1, and Westerly from Greenwich would be December 31.

THE HORSE

HORSES, GENERAL CARE OF

At least twenty minutes a day should be devoted to grooming with a hard brush, to keep the skin in good condition, and the mane and tail should be thoroughly washed and carefully dried afterwards when examination shows that it is necessary—some horses are naturally cleaner than others. Never let a horse drink his fill immediately after a journey. Give him a moderate drink and his feed after it, and do not water immediately after feeding, as this is one cause of colic. Swellings below the knees should be treated with cold water bandages loosely wound downward from the knee and kept wet, and the hoofs should be examined and cleaned immediately on returning to the stable. In feeding, the rule "little and often" may be remembered as safest. Large feeds at long intervals are another source of colic. When off his feed a horse may be tempted to eat by mixing a little chopped grass or green clover with his ordinary food. Care in grooming, stable management, and feeding are always well repaid by improved condition and increased capacity for work.

HOOF, CRACKED

When horses' hoofs are inclined to crack, it is an evidence that the horn is not in a healthy state. The cause may be uncertain; very often it is the result of washing the legs and feet without drying them. To promote the growth of the horn and get rid of cracks, nothing is better than to anoint the top of the hoof, just round the coronet, with a salve made of equal parts of soft soap and tar. The cracks, as far as possible, should

be kept cut, so as to present a smooth surface and prevent them from going any further.

HORSES, BROKEN-WINDED

This complaint is no doubt in some cases hereditary; but, in general, it is brought about by injudicious management, and especially by the use of mouldy hay. Owners of horses cannot be too particular about the hay they buy. Bad and indifferent hay is dear at any price, and no horse should be allowed to eat hay with the slightest tinge of mould about it. Much relief may be given to a broken-winded horse by proper feeding. Never give long hay. Let the food be the most nutritious possible, and that which will go into the smallest compass, as cut hay, and corn, and a few beans. Also be careful never to let a broken-winded horse have water within an hour after taking him out. The breathing will be much improved, and the horse will do its work more pleasantly if a ball of the following mixture be administered about half an hour before he takes a journey. Mix together equal parts of linseed-meal, hog's lard, and Stockholm tar; and give for a ball a piece about the size of a walnut, in paper.

HORSES, COLIC OR CRAMP IN

The symptoms of colic or cramp are unmistakable. The horse, as soon as the attack commences, appears very uneasy, trembles, lies down and rolls. The chief causes are cold water when the horse is heated from a long or sharp journey, overfeeding with green food, too much whole corn, or sudden exposure to cold. All treatment should

be applied with a view to producing warmth in the intestines. Rub the horse's belly briskly with a tightly wound wisp of straw, to produce counter irritation, then put a rug on him and lead him about outside the stable—do not permit him to remain still or roll. If the attack persists, administer about a quarter of a pint of brandy or other spirit, made up to a quart with tepid water, and apply hot fomentations to the belly. A further remedy may be administered, in obstinate cases, in the form of a draught compounded of $1\frac{1}{2}$ oz. of laudanum, 3 oz. of turpentine, and 1 pint of linseed oil. Take the horse off his corn for a day or two, give him dry bran and chaff, and water sparingly with slightly warm water. For at least the night following a seizure of colic, and, if possible, for the following day, thick rugs should be kept on to prevent a recurrence of the attack.

HORSES' FEET, TO STOP

This, in some cases, is a very useful operation. It depends, however, upon the nature of the sole, for if the sole is flat and very thin, the additional moisture afforded by stopping will do more harm than good. When the sole is dry, thick and hard, stopping is useful: it is only practised on the fore feet. The best stopping is a mixture of clay and cowdung, and the proper manner of using it is to fill the hollow of the sole of the foot with it up to the level of the shoe. Some horses require their feet to be stopped much oftener than others. In hot summer weather it is frequently desirable to use stopping two or three times a week. Some grooms use tow, and some moss, both of which must be kept moistened with water, as stopping; but there is nothing better or more easily managed than clay and cowdung well mixed together.

HORSES' HOOFS, TO PROTECT

Gutta-percha may be used to protect the feet of horses when tender. Cut it into small pieces, soften with hot water, then mix with half its weight of powdered sal-ammoniac, and melt the mixture in a tinned saucepan over

a gentle fire, keeping it well stirred. When required for use, melt in a glue-pot, scrape the hoof clean, and apply the mixture with a knife.

HORSES' HOOFS, THRUSH IN

Thrush is a hoof disease to which some horses are very susceptible, and may be instantly detected by an offensive smell arising from the hoof. The chief causes are lack of cleanliness in the stable, permitting the horse to stand with his feet in a wet place, and want of care in keeping the hoofs picked out. To treat thrush, see that the hoofs are thoroughly cleaned after each journey, especially down the sides of the frog, or soft part of the sole, make certain that the horse has a dry place to stand in, and paint the affected parts with Stockholm tar.

HORSES' TO CLIP

The value of clipping for horses cannot be overrated. Every horse that is worked at such a pace as to cause sweating should be clipped at the proper season. The best time for clipping is when the winter coat is "well up," as it is termed. The sooner this is the case the better, for the autumn is proverbially a faint time for horses. The clipping lasts best the later in the year it is done, for the colder the weather the less the coat grows; still, for the reason we have stated, the coat should be taken off as early as possible, and when it starts again, it should be kept down by singeing. Every one must appreciate the benefit of clipping who knows the difficulty of getting a horse, with its winter coat on, dry after a journey. The labour is immense, and, what is worse, generally ineffectual; for the horse after the first drying will break out into a heat again, and in all probability be found quite wet in the morning.

HORSES' TO ROUGH

The old-fashioned plan of turning up the shoe is a very bad and dangerous one. Many horses have done themselves great injury while standing in their stables with their shoes so roughed. The movable calking answers every purpose. In frosty

weather, every time a horse is fresh shod, the shoes should have holes drilled in them, one at each heel and one at the toe, to admit of the small iron calkings being screwed into them, when the horse has to travel on a slippery road. As soon as he comes into the stable the calking should be unscrewed, and put aside till again required for the road. The horse so roughed is in no danger of accident or injury.

In our very variable climate frost often sets in so suddenly that there is little or no opportunity of having horses roughed in the usual way, which always takes some time, even when the farrier is close at hand. Whenever such is the case, the following simple plan is recommended:—With a chisel and hammer rough well the surface of the shoe. This operation, with the proper tools, may be easily and quickly performed. The hammer may be an ordinary one, but the chisel should be short and stout, of the best cast steel, and what is usually termed "diamond-pointed." With such tools, that might easily be carried in the pocket, any one may rough a horse sufficiently to carry him firm and safe upon ice for a long journey. Take up the horse's feet, one after the other, precisely as the farrier would, and, if the shoe is tightly nailed on, with the point of the chisel on the flat surface, inclining to the toe of the shoe, give sharp blows with the hammer, and you will raise projecting bars or teeth, deeper cut than any on a farrier's rasp, and quite large enough to prevent all possibility of slipping upon the smoothest of ice. In the depth of winter, troopers, horse-artillerymen, cabmen and others who are often on the roads, should

always carry such simple tools with them.

HORSES, WOUNDS IN

All wounds of a bad character require the attention of an experienced veterinary, and they are best let alone till he comes. All that can be done is to sponge the place well with warm water to keep it clean. If the wound be not deep-seated, and also not in a dangerous place, the divided parts of the skin should be carefully drawn together by means of a few stitches with a needle and thread. Strappings of adhesive plaster may be made use of, friar's-balsam applied upon a piece of lint, and the whole secured by a bandage. When the edges of the wound are so far apart that they cannot conveniently be drawn together, the best plan is to apply a poultice, either of linseed meal or bread and water; the former is to be preferred, as retaining warmth for the longest time. If the place comes to a swelling, and is likely to break, it may be forwarded by the free use of the following liniment:—4 ozs. of fresh olive oil, 1½ ozs. of spirits of turpentine, 1 oz. of tincture of camphor, 1 oz. of tincture of opium, the yolk of 1 fresh egg. Mix all these ingredients well together, and keep them in a bottle for use. Apply the liniment warm to the wound, but do not touch the surrounding swelling. When all the matter has been discharged, wash the part with warm water, and dress it with friar's-balsam or tincture of arnica diluted in the proportion of one part arnica to ten of water. If proud flesh appears, it must be got rid of by the judicious application of caustic, or by a little blue-stone or burnt alum.

THE ANNIVERSARIES OF WEDDINGS

1st Anniversary	Cotton wedding.
2nd	" Paper wedding.
3rd	" Leather wedding.
7th	" Wooden wedding.
10th	" Tin wedding.
15th	" Crystal wedding.

20th Anniversary	China wedding.
25th	" Silver wedding.
30th	" Pearl wedding.
40th	" Ruby wedding.
50th	" Golden wedding.
75th	" Diamond wedding.

HOUSEHOLD RECIPES

ANTI-FRECKLE LOTION

Mode.—Mix 2 ozs. of tincture of benzoin, 1 oz. of tincture of tolu $\frac{1}{2}$ a drachm of oil of rosemary well in a corked bottle. When required for use, add a teaspoonful of the mixture to a wineglassful of water, and apply the lotion where required night and morning, gently dabbing it in with a soft linen cloth.

BICYCLE, TO CLEAN

A little box containing all the accessories necessary for cleaning a bicycle is obtainable from any dealer. After a ride, and while the mud and dust are quite fresh, brush the machine thoroughly. Clean the chain with paraffin, and oil very slightly with cycle oil, taking care to wipe carefully afterwards, or dust will accumulate on the oil and clog the machine. Wash the enamelled and plated parts, dry carefully and polish the latter with plate powder. Avoid wetting the tyres.

In storing a bicycle away for the winter, cover the metal parts with vaseline. If the room in which the bicycle is to be kept is very dry, keep a basin of water there. A moist atmosphere will prevent the tyres from spoiling.

BLACKING (Five Methods).

1. Mix 12 ozs. of ivory-black, 1 oz. of olive oil, 8 ozs. of treacle and $\frac{1}{2}$ an oz. of powdered gum-arabic into a paste, then gradually add 2 quarts of vinegar and stir well. Next add 1 $\frac{1}{2}$ ozs. of sulphuric acid.

2. Rub $\frac{1}{2}$ of a lb. of Ivory-black, $\frac{1}{2}$

of a lb. of treacle, and 1 oz. of sweet oil together until the oil is quite "killed," then gradually add 1 oz. of vitriol, diluted with three or four times its weight of water. Mix well and let stand for 3 or 4 hours, when it may be reduced to its proper consistence with water or sour beer.

3. Mix 2 ozs. of ivory-black, 2 ozs. of brown sugar-candy, and 1 tablespoonful of sweet oil; add gradually 1 pint of vinegar and stir the whole gently until incorporated.

4. Dissolve 1 oz. of gum-arabic and 2 ozs. of treacle in $\frac{1}{2}$ a pint of ink and 2 ozs. of vinegar; then strain and add the spirits.

5. Rub 1 lb. of Ivory-black in fine powder, $\frac{1}{2}$ of a lb. of molasses and 2 ozs. of sweet oil together until the oil is quite "killed"; then add 1 pint of beer, and 1 pint of vinegar.

BLUE, STONE OR BALL

Take finely powdered indigo and starch in equal quantities, and make them into a paste with warm water, then form the mass into small lumps or cakes. The quantity of indigo must be increased if the blue is required to be of a very deep colour.

BOARDS, TO REMOVE STAINS

Take $\frac{1}{2}$ of a lb. of fuller's-earth and $\frac{1}{2}$ of a lb. of pearlash; make them into a paste with about a quart of boiling water; spread a thick coating of this over the grease-stains and leave it for ten or twelve hours; then wash it off with clean water, using sand if necessary. If the grease stains are very numerous

and the floor very dirty, a coating may be spread all over the floor, and left for 24 hours before it is washed off. In washing boards never rub cross-ways; but always up and down with the grain.

BOARDS, TO SCOUR

Mix in a saucer three parts of fine sand and one part of lime; dip the scrubbing-brush into this and use it instead of soap. This will remove grease and whiten the boards, while at the same time it will destroy all insects. The boards should be well rinsed with clean water. If they are very greasy, they should be covered over in places with a coating of fuller's-earth moistened with boiling water, which should be left on 24 hours before they are scoured as above directed.

BOOKS, TO CLEAN

Books may be cleaned with a little dry bread crumbled up and rubbed gently but firmly over with the open hand. Cloth covers may be washed with a sponge dipped in a mixture made from the white of an egg beaten to a stiff froth and afterwards allowed to settle.

BOOKS, TO CLEAN GREASE MARKS FROM

Damp the grease marks with a little benzine, place a piece of blotting-paper on each side of the page, and pass a hot iron over the top.

BOOKS, TO KEEP MICE FROM

This is a very difficult matter, but much may be done if a little Cayenne pepper is sprinkled in the cracks at the back of the shelves of the bookcase.

BOOKS, TO PRESERVE FROM DAMP

A few drops of strong perfumed oil, sprinkled in the bookcase will preserve books from damp and mildew.

BOOTS, BROWN, TO POLISH

Remove stains with lemon juice, and polish with beeswax dissolved in turpentine.

BOOTS, PATENT LEATHER, TO CLEAN

Patent leather boots require to be wiped with a wet sponge, and afterwards with a soft dry cloth, and occasionally with a soft cloth and sweet oil; black and polish the edges of the soles in the usual way, but so as not to cover the patent polish with blacking. A little milk may also be used with very good effect for patent leather boots.

BOOTS, TO CLEAN

Three good brushes and good blacking must be provided: one hard brush to brush off the mud; the second soft, to lay on the blacking; the other of a medium hardness, for polishing; and each should be kept for its particular use. The blacking should be kept corked up, except when in use, and applied to the brush with a sponge tied to a stick, which, when put away, rests in a notch cut in the cork. When boots come in very muddy, it is a good practice to wash off the mud, and wipe them dry with a sponge; then leave them to dry very gradually on their sides, taking care they are not placed near the fire, or scorched. Much delicacy of treatment is required in cleaning ladies' boots, so as to make the leather look well-polished, and the upper part retain a fresh appearance, with the lining free from handmarks. With the patent blacking preparation so much in vogue now, a final polish with a soft cloth is required instead of the polishing brush, and the blacking may also be rubbed on with a rag.

BOOTS, TO PREVENT FROM CRACKING

Saturate a piece of flannel in boiled linseed oil and rub it well over the soles and round the edges of the boots, then stand them soles upwards to dry.

BOOTS, TO RENDER DAMP-PROOF

Treat in exactly the same way as in the recipe, boots, to prevent from cracking.

BOOTS, VARNISH FOR

Dissolve 1 tablespoonful of isinglass in $\frac{1}{2}$ a pint of water, and then add to

it the yolks of 6 eggs, well beaten, and 2 oz. of treacle, using sufficient lamp-black to give the required colour. If the colour needs restoring take a small quantity of good black ink, mix it with the white of an egg, and apply it to the boots with a soft sponge.

BRASS, TO CLEAN

Dissolve 1 oz. of oxalic acid in one pint of soft water. Rub it on the brass with a piece of flannel, and polish with another dry piece. This solution should be kept in a bottle labelled "poison," and the bottle well shaken before it is used, which should be only occasionally, for in a general way the brass should be cleaned with pulverized rottenstone, mixed into a liquid state with oil of turpentine. Rub this on with a piece of soft leather, leave for a few minutes, and then wipe it off with a soft cloth. Brass treated generally with the latter, and occasionally with the former mode of cleaning, will look most beautiful. A very good general polish for brass may be made of $\frac{1}{2}$ a lb. of rottenstone and 1 oz. of oxalic acid, with as much water as will make it into a stiff paste. Set this paste on a plate in a cool oven to dry, pound it very fine, and apply a little of the powder, moistened with sweet oil, to the brass with a piece of leather, polishing with another leather or an old silk handkerchief. This powder should also be labelled "poison."

BRITANNIA METAL, TO CLEAN

Articles made of what is usually called Britannia Metal may be kept in order by the frequent use of the following composition:— $\frac{1}{2}$ a lb. of finely-powdered whiting, a wineglass of sweet oil, a tablespoonful of soft soap, and $\frac{1}{2}$ an oz. of yellow soap melted in water. Add to these in mixing sufficient spirits—gin or spirits of wine—to make the compound the consistency of cream. This cream should be applied with a sponge or soft flannel, wiped off with soft linen rags, and the article well polished with a leather; or they may be cleaned with only oil and soap in the following manner:—Rub the articles with sweet oil on a piece of woollen cloth; then wash well with strong soap-and-water; rub

them dry and polish with a soft leather and whiting. The polish thus given will last for a long time.

BRUSHES, TO STIFFEN

After washing, brushes frequently become very soft. If they are dipped in a strong solution of alum water they will become stiff and hard again.

BRUSHES, TO WASH

Dissolve a piece of soda in some hot water, allowing a piece the size of a walnut to a quart of water. Put the water into a basin, and after combing out the hair from the brushes, dip them, bristles downward, into the water and out again, keeping the backs and handles as free from the water as possible. Repeat this until the bristles look clean; then rinse the brushes in a little cold water; shake them well, and wipe the handles and backs with a towel, *but not the bristles*, and set the brushes to dry in the sun, or near the fire; but take care not to put them too close to it. Wiping the bristles of a brush makes them soft, as does also the use of soap.

CARPETS, TO CLEAN

Carpets in bedrooms and stair-carpets may be kept clean by being brushed with a soft hair-brush frequently, and, as occasion requires, being taken up and shaken. Larger carpets should be swept carefully with a whisk-brush or hand-brush of hair, which is far better, especially in the case of fine-piled carpets. Thick carpets, as Axminster and Turkey, should always be brushed one way. Grease spots can be removed from carpets by means of a paste made of boiling water poured on equal quantities of magnesia and fuller's-earth. This paste, while hot, must be placed upon the grease spots and brushed off when quite dry. When carpets are very dirty, they may be washed in the following manner:—To every 2 gallons of boiling water add 1 oz. of yellow soap and 1 drachm of soda. With a clean flannel wash the carpet well with the liquid; do a small piece at a time and rinse well with clean hot water. When all has been gone over, the carpet should be left to dry. The colours will be

greatly improved by afterwards rubbing over with a clean flannel dipped in a strong solution of ox-gall and water.

CARPETS, TO CLEAN (Another Method).

Melt 1 lb. of yellow soap and $\frac{1}{2}$ lb. of soda in an oven; then mix them well in a gallon of water to which add 1 oz. of nitric acid. With a clean scrub-brush wash the carpet well from seam to seam with this mixture, and rinse it off quickly with clean soft water. Do only a small piece of carpet at the time, and rub dry with a clean cloth as much as is washed.

CARPETS, TO LAY

This can hardly be well done without the aid of a proper carpet-fork or stretcher, which may be purchased for about 2s. 6d. at any ironmonger's. Work the carpet the length way of the material, which ought to be made up the length way of the room. Nail one end all along, but do not nail the sides as you go along until you are quite sure that the carpet is fully stretched, and that there is no ruck anywhere in the length of it.

CARPETS, TO SCOUR WITH GALL

Let the carpets first be well beaten and brushed to free them from all dust and dirt. Then scour them quickly with a solution of ox-gall, which will both extract grease and refresh the colours. One pint of gall in three gallons of soft water, warmed, will be sufficient for a large carpet. It is better not to mix the whole at once, but to do a portion of the carpet at a time, especially if it is a large one; for when the mixture in use gets cold and dirty it should be thrown away. Care must be taken that the carpet does not shrink in drying. It is best washed in the room, after it is nailed down.

CASKS, TO CLEAN

It is important that casks for wine or ale should be perfectly clean and free from any acid smell or mustiness before they are used. Lactic and acetic acid get absorbed in the wood very often, and do great damage to

fermenting liquid. The ordinary way of washing a cask is with boiling water, and when cool examining it with a light inside. If there be any sour or musty smell, however, lime must be used to remove it. Break the lime into lumps, and put it in the cask dry (it will take from 3 to 4 lb. for each cask), then pour in as many gallons of boiling water as there are pounds of lime, and bung. Roll the cask about now and then, and after a few hours wash it out, steam it, and let it cool.

CHIMNEY ON FIRE

Close all doors and windows tightly, and hold a wet blanket in front of the fire to prevent any draught going up the chimney.

CHINA AND GLASS, CEMENT FOR

Dissolve 1 oz. of gum-mastic in a quantity of highly-rectified spirits of wine; then soften 1 oz. of isinglass in warm water, and, finally, dissolve it in rum or brandy, till it forms a thick jelly. Mix the isinglass and gum-mastic together, adding $\frac{1}{4}$ of an oz. of finely-powdered gum-ammoniac; put the whole into an earthen pipkin, and in a warm place, till they are thoroughly incorporated together; pour it into a small phial, and cork it down for use.

In using it, dissolve a small piece of the cement in a silver teaspoon over a lighted candle. The broken pieces of glass or china being warmed, and touched with the now liquid cement, join the parts neatly together, and hold them in their places till the cement has set; then wipe away the cement adhering to the edge of the joint, and leave it for twelve hours without touching it: the joint will be as strong as the china itself, and if neatly done, it will show no joining. It is essential that neither of the pieces be wetted either with hot or cold water.

CLOTH, BLACK, REVIVER FOR

Macerate 2 ozs. of blue galls, bruised; $\frac{1}{2}$ an oz. each of logwood, sulphate of iron, sumach, and 1 pint of vinegar, in a close vessel with heat for twenty-four hours; strain off the clear liquid, add the galls, and shake twice a day for a week. Keep in a corked bottle,

and apply with a brush or sponge. This is improved by the addition of a little sugar and gum.

CLOTH, TO CLEAN

Mix dry fuller's-earth moistened with lemon-juice, and a small quantity of pulverized pearlash into balls with sufficient lemon-juice to moisten. Scour the cloth with the balls.

CLOTHES, CARE OF

Dresses of tweed, and other woollen materials may be laid out on a table and brushed all over; but in general, even in woollen fabrics, the lightness of the issues renders brushing unsuitable to dresses, and it is better to remove the dust from the folds by beating them lightly with a handkerchief or thin cloth. Silk dresses should never be brushed, but rubbed with a piece of merino, or other soft material, of a similar colour, kept for the purpose. Summer dresses of *barège*, muslin, mohair, and other light materials, simply require shaking; but if the muslin be tumbled, it must be ironed afterwards,

If feathers have suffered from damp, they should be held near the fire for a few minutes, and restored to their natural state by the hand or a soft brush, or re-curved with a blunt knife, dipped in very hot water. Satin boots or shoes should be dusted with a soft brush, or wiped with a cloth. Kid or varnished leather should have the mud wiped off with a sponge charged with milk, which preserves its softness and polish. Furs and feathers not in constant use should be wrapped up in linen washed in lye. From May to September they are subject to being made the depository of the moth-eggs.

CLOTHES, TO BRUSH

Fine clothes require to be brushed lightly, and with a rather soft brush, except where mud is to be removed, when a hard one is necessary; previously beat the clothes lightly to dislodge the dirt. Lay the garment on a table, and brush in the direction of the nap. Having brushed it properly turn the sleeves back to the collar, so that the folds may come at the elbow-joints; next turn the lapels or sides

back over the folded sleeves; then lay the skirts over level with the collar, so that the crease may fall about the centre, and double one half over the other, so that the fold comes in the centre of the back.

CLOTHES, TO CLEAN, FROM GREASE AND OTHER STAINS

Take 1 peck of new lime; pour over it as much water as will leave about 2 gallons of clear liquid after it has been well stirred and has settled. In about 2 hours pour off the clear liquid into another vessel; then add to it 6 ozs. of pearlash; stir well, and when settled bottle for use. With this liquid wash the clothes, using a coarse piece of sponge for the purpose. If the clothes are of very fine fabric and delicate colour, the liquid must be diluted with clear, soft water.

CLOTHING, TO REMOVE PAINT FROM

Rub immediately with a rough rag wetted with spirits of turpentine.

COMBS, TO CLEAN

If it can be avoided, never wash combs, as the water often makes the teeth split, and the tortoiseshell or horn of which they are made, rough. Small brushes, manufactured purposely for cleaning combs, may be purchased at a trifling cost; the comb should be well brushed, and afterwards wiped with a cloth or towel.

CORKS, TO PRESERVE FROM INSECTS

Dip the heads of the bottles when corked into quicklime slaked into a paste and let it harden on. Petroleum rubbed over the corks and necks will also serve to keep the insects away, but it is not quite so efficacious as the lime.

CRAPE, TO RENOVATE

Place a little water in a tea-kettle and let it boil until there is plenty of steam from the spout; then, holding the crape with both hands, pass it to and fro several times through the steam, and it will be clean and look nearly equal to new.

CRAPE, TO RESTORE, WHEN SPOTTED.

Black crape when wetted by rain is almost certain to spot. When this is the case, lay the crape—whether a veil or piece of trimming—on a table, and place a piece of old black silk underneath the stains; then dip a soft camel-hair brush in black ink, and carefully paint the stains over with it; gently wipe off with a piece of silk the superabundant ink, and the stains will disappear as the places dry.

CRICKETS AND BEETLES, TO DESTROY

Place a fairly deep saucer of stale beer upon the hearth at night time, and rest three or four sticks upon the edge of the saucer for the insects to crawl up.

CUPBOARDS, DAMP

Leave a quantity of quicklime in the cupboard for a few days, and the moisture will be entirely absorbed.

DIAMONDS, TO CLEAN

Wash with soap and water, and dry carefully with blotting paper which, rolled to a point, will reach all the crevices in the setting.

DISH COVERS, TO CLEAN

Wash in hot soapy water, and then rub the inside of the cover with sweet oil and a rag. Clean the outside with finely-powdered whitening and polish with leather.

DRESSES, TO REMOVE SPOTS AND STAINS FROM

To remove grease-spots from cotton or woollen materials, absorbent pastes, purified bullock's blood, and even common soap, are used, applied to the spot when dry. When the colours are not fast, place a layer of fuller's-earth or pulverized potter's clay over the spot, and press with a very hot iron. For silks, moires, and plain or brocaded satins, pour two drops of rectified spirits of wine over the spot, cover with a linen cloth, and press with a hot iron, changing the linen instantly. The spot will look tarnished, for a portion of the grease still remains;

this will be removed entirely by a little sulphuric ether dropped on the spot, and a very little rubbing. If neatly done, no perceptible mark or circle will remain; nor will the lustre of the richest silk be changed, the union of the two liquids operating with no injurious effects from rubbing. Eau-de-Cologne will also remove grease from cloth and silk. Fruit-spots are removed from white and fast-coloured cottons by the use of chloride of soda. Commence by cold-soaping the article, then touch the spot with a hair-pencil or feather dipped in the chloride, and dip immediately into cold water, to prevent the texture of the article being injured. Fresh ink-spots are removed by a few drops of hot water being poured on immediately after applying the chloride of soda. By the same process, iron-mould in linen or calico may be removed, dipping immediately in cold water to prevent injury to the fabric. Wax dropped on a shawl, table-cover, or cloth dress, is easily discharged by applying spirits of wine; syrups or preserved fruits, by washing in lukewarm water with a dry cloth, and pressing the spot between two folds of clean linen.

FEATHERS, TO CLEAN

Cover the feathers with a paste made of pipe-clay and water, rubbing them one way only. When quite dry, shake off all the powder and curl with a knife. Grebe feathers may be washed with white soap in soft water.

FIRE, TO LIGHT A

Clear out all ash from the grate and lay a few cinders or small pieces of coal at the bottom in open order; over this a few pieces of paper, and over that again eight or ten pieces of dry wood; over the wood, a course of moderate-sized pieces of coal, taking care to leave hollow spaces between for air at the centre; and taking care to lay the whole well back in the grate, so that the smoke may go up the chimney, and not into the room. This done, fire the paper with a match from below and, if properly laid, it will soon burn up; the stream of flame from the wood and paper soon communicating to the coals and

cinders, provided there is plenty of air at the centre.

Another method of lighting a fire is sometimes practised with advantage, the fire lighting from the top and burning down, in place of being lighted and burning up from below. This is arranged by laying the coals at the bottom, mixed with a few good-sized cinders, and the wood at the top, with another layer of coals and some paper over it; the paper is lighted in the usual way, and soon burns down to a good fire, with some economy of fuel, it is said.

FLIES, TO DESTROY

Beer or treacle in a saucer or treacle smeared on sheets of paper will attract and kill flies. If a small quantity, say the equivalent of a teaspoonful, of carbolic acid be poured on a hot shovel it will drive the flies from the room.

FLOORCLOTH, TO CLEAN

Shred half an ounce of good beeswax into a saucer, cover it entirely with turpentine, and place in the oven until melted. After washing the floorcloth thoroughly with a flannel, rub the whole surface lightly with a flannel dipped in the wax and turpentine, then rub with a dry cloth. Beside the polish produced, the surface is lightly coated with the wax, which is washed off together with any dust or dirt it may have contracted, while the floorcloth is preserved. Milk is also very useful for cleaning floorcloth, applied after the usual washing with a damp cloth, and it should then be rubbed over with a dry one.

FLOWERS, CUT, TO PRESERVE

A bouquet of freshly-cut flowers may be preserved alive for a long time by placing them in a glass or vase with fresh water, in which a little charcoal has been steeped, or a small piece of camphor dissolved. The vase should be set upon a plate or dish, and covered with a bell glass, around the edges of which, when it comes in contact with the plate, a little water should be poured to exclude the air.

FLOWERS, CUT, TO REVIVE

Plunge the stems into boiling water,

and by the time the water is cold, the flowers will have revived. Then cut the ends of the stems afresh, and place in fresh cold water.

FURNITURE GLOSS, GERMAN

Cut $\frac{1}{4}$ of a lb. of yellow wax into small pieces and melt it in a pipkin, with 1 oz. of black rosin pounded very fine. Stir in gradually, while these two ingredients are quite warm, 2 ozs. of oil of turpentine. Keep this composition well covered for use in a tin or earthen pot. A little of this gloss should be spread on a piece of coarse woollen cloth, and the furniture well rubbed with it; afterwards it should be polished with a fine cloth.

FURNITURE PASTE

Mix 3 oz. of common beeswax, 1 oz. of white wax, 1 oz. of curd soap, and 1 pint of turpentine together, adding 1 pint of boiled water when cold; shake the mixture frequently in the bottle, and do not use for 48 hours after it is made. It should be applied with a piece of flannel, the furniture polished with a duster, and then with an old silk rubber.

FURNITURE POLISH.

Mix equal proportions of linseed-oil, turpentine, vinegar and spirits of wine. When used, shake the mixture well, and rub on the furniture with a piece of linen rag, and polish with a clean duster. Vinegar and oil, rubbed in with flannel, and the furniture rubbed with a clean duster, produce a very good polish.

FURNITURE POLISH (Another Method)

Boil 1 pint of soft water, let it get cold; shred 1 oz. of white wax and 1 oz. of Naples soap into it, stand it in the oven until all is melted; add 1 pint of turpentine slowly, stirring as it is dropped in; stir it until cold; bottle and cork closely; it is fit to use the next day.

FURS, TO CLEAN*

Moisten some bran with hot water, rub the fur with it, and dry with a flannel. Then rub with a piece of muslin and some dry bran.

GAS, TO DETECT A LEAK.

Never take a light into the room or look for the leak with a light. Soap and water mixed, and applied with a brush to the pipe will commence to bubble if there is a leak. Send for the plumber at once.

GILT FRAMES, TO BRIGHTEN

Take sufficient flour of sulphur to give a golden tinge to about $1\frac{1}{2}$ pints of water, and in this boil four or five bruised onions. Strain off the liquid when cold and with it wash with a soft brush any gilding which requires restoring, and when dry it will come out as bright as new work. Frames may also be brightened in the following manner:—Beat up the white of eggs with chloride of potass or soda, in the proportion of 3 ozs. of eggs to 1 oz. of chloride of potass or soda. Blow off as much dust as possible from the frames, and paint them over with a soft brush dipped in the mixture. They will immediately come out fresh and bright.

GLASS. TO WASH

Great care is required in washing glasses. Two perfectly clean bowls are necessary, one for moderately hot and another for cold water. Wash the glasses well in the first, rinse them in the second, and turn them down on a linen cloth folded 2 or 3 times, to drain for a few minutes. When sufficiently drained, wipe with a cloth and polish with a finer one, doing so tenderly and carefully.

Decanters and water-jugs require very tender treatment in cleaning. Fill about two-thirds with hot but not boiling water, and put in a few pieces of well-soaked brown paper: leave them thus for 2 or 3 hours; then shake the water up and down in the decanters; empty this out, rinse them well with clean cold water, and put them in a rack to drain. When dry, polish them outside and inside, as far as possible, with a fine cloth. To remove the crust of port or other wines, add a little muriatic acid to the water and let it remain for some time. Fine pieces of coal placed in a decanter with warm water, and shaken

for some time, will also remove stains.

GLASS STOPPERS, TO LOOSEN

Pour a little salad oil round the stopper, and place the bottle near the fire, then tap the stopper with a wooden instrument. The heat will cause the oil to work round the stopper, and it should be easily removed.

GRATES, BLACK, POLISH FOR

Melt 1 lb. of common asphaltum, and add gradually to it $\frac{1}{2}$ a pint of linseed-oil, 1 quart of oil of turpentine. Apply this with a small painter's brush, and leave it to become perfectly dry. The grate will need no other cleaning, but it will merely require dusting every day, and occasionally brushing with a dry blacklead brush. This is, of course, when no fires are used. When they are required, the bars, cheeks and back of grate will need blackleading in the usual manner.

HAIR, TO PROMOTE THE GROWTH OF

Mix equal quantities of olive-oil and spirit of rosemary and a few drops of oil of nutmeg together, rub the root of the hair every night with a little of this liniment, and the growth of it will very soon sensibly increase. When illness is the cause of the loss of hair, brandy should be applied 3 times a week, and cold cream on the alternate nights.

HAIR, TREATMENT OF THE

Twice a month wash the head with a quart of soft water, in which a handful of bran has been boiled, and in which a little white soap has been dissolved. Next rub the yolk of an egg, slightly beaten, into the roots of the hair, let it remain a few minutes, and wash it off thoroughly with pure water, rinsing the head well. Wipe and rub the hair dry with a towel, and comb the hair up from the head, parting it with the fingers. If the hair has been very dry *before* the washing, a little pomatum should be used.

HAIR, WASH FOR THE

Pour 1 pint of boiling water over

1 pennyworth of borax and $\frac{1}{4}$ a pint of olive-oil; let it cool; then put the mixture into a bottle. Shake before using, and apply with a flannel. Camphor and borax, dissolved in boiling water and left to cool, makes a very good wash for the hair; as also does rosemary-water mixed with a little borax. After using any of these washes, when the hair becomes thoroughly dry, a little pomatum or oil should be rubbed in, to make it smooth and glossy.

HAIR, WASH FOR THIN

Mix 8 ozs. of elder-flower water, 4 ozs. of distilled vinegar, 2 ozs. of good rum, 4 drs. of glycerine, 4 drs. of tincture of bark well together, and apply the lotion every night.

Note.—Loss of hair is often occasioned by a weak state of health, and tonics taken in those cases will do more towards restoring the hair than any washes.

HANDS, CHAPPED

If the hands are washed in soft water with the best honey soap, and well rubbed dry with a soft towel, they will never chap. It is generally imperfect and careless washing and drying which causes this inconvenience. When the hands are badly chapped, rub them 2 or 3 times a day with lemon-juice, or rub them over occasionally with an ointment made of fresh hog's-lard washed in rose or elder-flower water, a spoonful of honey, 2 spoonfuls of fine oatmeal well beaten up with the yolks of 2 new-laid eggs; or a useful wash for chapped hands may be made by adding 14 grains of sulphuric acid to 1 pint of rose-water and $\frac{1}{4}$ an oz of oil of almonds, well shaken together, and when used diluted with a little water.

HANDS, TO MAKE SOFT AND WHITE

Put a pinch of powdered alum into a basin and break into it the white of an egg. Mix this up and spread over the hands just before retiring. The hands should have been previously washed in hot water and thoroughly dried. A little borax in the water used for washing the hands is an excellent

thing, as also is dry oatmeal rubbed on after washing.

HARNESS BLACKING, FOR PRESERVING THE LEATHER

Melt 4 ozs. of mutton suet with 12 ozs. of beeswax; add 12 ozs. of sugar-candy, 4 ozs. of soft soap dissolved in water, and 2 ozs. of indigo, finely powdered. When melted and well mixed, add $\frac{1}{4}$ a pint of turpentine. Lay the blacking on the harness with a sponge, and polish off with a brush.

HARNESS DYE

Put 2 lb. of logwood chips, 3 ozs. of copperas, 3 ozs. of nut-gall, 1 oz. of indigo, a 6d. packet of British ink powder into 2 quarts of water, and let all boil gently for half an hour. This dye will be found very useful for harness which has been for some time neglected and become rusty-looking.

HARNESS-MAKERS' JET

Take 1 drachm of indigo, $\frac{1}{4}$ of an oz. of isinglass, $\frac{1}{4}$ an oz. of soft soap, 4 ozs. of glue, 1 pennyworth of logwood raspings and 1 quart of vinegar; boil the whole over a slow fire till reduced to 1 pint. A small quantity is then taken up on a piece of clean sponge and thinly applied to previously well cleaned harness, boots, etc.

HARNESS PASTE

Mix 2 ozs. of ivory-black, 4 ozs. of beeswax, $\frac{1}{4}$ an oz. of Prussian blue, and 3 ozs. of spirits of turpentine in a jar, and dissolve them by heat, by placing the jar in a saucepan of hot water.

HARNESS POLISH

An excellent paste for polishing harness and the leather work of carriages is made by melting 8 lb. of yellow wax, stirring it till completely dissolved. Into this pour 1 lb. of litharge of the shops, which has been pounded up with water, and dried and sifted through a sieve, leaving the two, when mixed, to simmer on the fire, stirring them continually till all is melted. When it is a little cool, mix this with 1 $\frac{1}{4}$ lb. of good ivory-black; place on the fire, and stir till it boils

anew, and then let it cool. When cooled a little, add distilled turpentine till the mixture has the consistence of a thickish paste. Scent with any essence at hand ; thin when necessary from time to time by adding distilled turpentine.

HATS, FELT, TO RENOVATE

Mix equal quantities of benzine and water, and after well brushing the hat apply the mixture with a sponge.

IRONS, TO REMOVE RUST FROM

Scour with dry salt and beeswax.

JEWELLERY, TO CLEAN

Jewels are generally wrapped up in cotton wool and kept in their cases ; but they tarnish from exposure to the air and require cleaning. This is done by preparing clean soap-suds from fine toilet-soap. Dip any article of gold, silver, gilt or precious stones into this lye, and dry by brushing with a brush of soft badger's hair, or a fine sponge ; afterwards polish with a piece of fine cloth, and lastly, with a soft leather.

Gold or silver ornaments, and in general all articles of jewellery, may be dressed by dipping them in spirits of wine warmed in a *bain marie*, or shallow kettle, placed over a slow fire or hot plate. Silver ornaments should be kept in fine arrowroot, and completely covered with it.

KNIVES AND FORKS, TO CLEAN

Knives are now generally cleaned by means of a knife-cleaning machine, which gives very little trouble, and is very effective. Before putting the knives into the machine, they should be first washed in a little warm (not hot) water and then thoroughly wiped ; if put into the machine with any grease on them, it adheres to the brushes, which become unfit for use. When this precaution is not taken, the machine must come to pieces, so causing an immense amount of trouble, which may all be avoided by having the knives thoroughly free from grease before using the machine. Brushes are also used for cleaning

forks, which facilitate the operation. When they are so cleaned, see that they are carefully polished, wiped and the knives with a good edge, the ferules and prongs of forks free from dirt, and place them in the basket with the handles all one way.

KNIVES NOT IN USE, TO KEEP

Knives not in use will soon spoil. They are best kept in a box in which sifted quicklime has been placed, deep enough to admit of the blades being completely plunged into it. The lime must not touch the handles, which should be occasionally exposed to the air, to keep them from turning yellow.

KNIVES, TO WASH

The handles of knives should never be immersed in water, as, after a time, if treated in this way the blades will loosen and the handles discolour. The blades should be put in a jug or vessel kept for the purpose, filled with hot soda water. This should be done as soon after the knives are used as possible, as stain and rust quickly sink into steel.

LACE, BLACK, TO REVIVE

Make some black tea about the strength usual for drinking and strain it off the leaves. Pour enough tea into a basin to cover the material ; let it stand ten or twelve hours, then squeeze the lace several times, but do not rub it. Dip it frequently into the tea, which will at length assume a dirty appearance. Have ready some weak gum-water and press the lace gently through it ; then clap it for a quarter of an hour ; after which, pin it to a towel in any shape which you wish it to take. When nearly dry cover it with another towel and iron it with a cool iron. The lace, if previously sound and discoloured only, will after this process look as good as new.

LAMPS, TO TRIM

Lamp-trimming requires a thorough acquaintance with the mechanism of the lamp ; clean out the reservoir occasionally with hot water ; when this is done, all the parts should be carefully dried before filling again with oil. When lacquered, wipe the

lacquered parts with a soft brush and cloth, and wash occasionally with weak soap-suds, wiping carefully afterwards. Brass lamps may be cleaned with oil and rottenstone every day when trimmed. With bronze and other ornamental lamps, more care will be required, and soft flannel and oil only used, to prevent the removal of the bronze or enamel. Brass-work or any metal work not lacquered may be cleaned with a little oil and rottenstone made into a paste, or with fine emery-powder and oil mixed in the same manner. A small portion of sal-ammoniac, beat into a fine powder and moistened with soft water, rubbed over brass ornaments, and heated over a charcoal fire, and rubbed dry with bran or whitening, will give to brass-work the brilliancy of gold. In trimming lamps, let the wick be cut evenly all round; as, if left higher in one place than it is in another, it will cause it to smoke and burn badly. The lamp should then be filled with oil from a feeder and afterwards well wiped with a cloth or rag. Small sticks, covered with wash-leather pads, are the best things to use for cleaning the inside of the chimney, and a clean duster for polishing the outside. Chimneys should not be washed. The globe of a moderator lamp should be occasionally washed in warm soap-and-water, then well rinsed in cold water, and either wiped dry or left to drain. Where candle-lamps are used, take out the springs occasionally and free them well from the grease that adheres to them.

LEATHER, LIGHT-COLOURED, TO CLEAN

For fawn or yellow-coloured leather, take a quart of skimmed milk, pour into it 1 oz. of sulphuric acid, and, when cold, add to it 4 ozs. of hydrochloric acid, shaking the bottle gently until it ceases to emit white vapours; separate the coagulated from the liquid part, by straining through a sieve, and store it away till required. Clean the leather with a weak solution of oxalic acid, washing it off immediately, and when dry apply the composition with a sponge.

LEATHER, TO CLEAN

When the leather is old and greasy, it should be cleaned, before applying this polish, with a brush wetted in a weak solution of potass and water, washing afterwards with soft river water, and drying thoroughly. If the leather is not black, one or two coats of black ink may be given before applying the polish. When quite dry, the varnish should be laid on with a soft shoe-brush, using also a soft brush to polish the leather. When the leather is very old, it may be softened with fish-oil, and, after putting on the ink, a sponge charged with distilled turpentine passed over, to scour the surface of the leather, which should be polished as directed.

LINEN, TO BLEACH

Make a solution of $\frac{1}{2}$ of a lb. of chloride of lime and 1 quart of soft water and keep the bottle closely corked; dilute what is required for use with an equal quantity of water. This will remove stains from table-linen, etc., that resist milder treatment.

LINEN, TO GLAZE

The gloss, or enamel, as it is sometimes called, is produced mainly by friction with a warm iron, and may be put on linen by almost any person. The linen to be glazed receives as much strong starch as it is possible to charge it with, then it is dried. To each pound of starch a piece of sperm or white wax, about the size of a walnut, is usually added. When ready to be ironed, the linen is laid upon the table and moistened very lightly on the surface with a clean wet cloth. It is then ironed in the usual way with a flat-iron, and is ready for the glossing operation. For this purpose a peculiar heavy flat-iron, rounded at the bottom, as bright as a mirror, is used. It is pressed firmly upon the linen and rubbed with much force, and this frictional action puts on the gloss. "Elbow grease" is the principal secret connected with the art of glossing linen.

LINEN, TO REMOVE IRON- MOULD FROM

Oxalic acid and hot water will remove iron-mould, so also will common

sorrel bruised in a mortar and rubbed on the spots. In both cases the linen should be well washed after the remedy has been applied.

LINEN, TO REMOVE IRON-MOULD FROM (Another Method)

Rub the spot with a little powdered oxalic acid, or salts of lemon and warm water. Let it remain a few minutes, and well rinse in clear water, or wash the spots with a strong solution of cream of tartar and water. Repeat if necessary, and dry in the sun.

LINEN, TO REMOVE SCORCH MARKS FROM

Boil $\frac{1}{2}$ a pint of vinegar, 2 ozs. of fuller's-earth, 1 oz. of dried fowl's dung, $\frac{1}{2}$ an oz. of soap and the juice of 2 large onions together to the consistency of paste; spread the composition thickly over the damaged part, and if the threads be not actually consumed, after it has been allowed to dry on, and the place has subsequently been washed once or twice, every trace of scorching will disappear.

LOOKING-GLASSES, TO CLEAN

Remove, with a damp sponge, fly stains and other soils (the sponge may be damped with water or spirits of wine). After this dust the surface with the finest sifted whiting or powder-blue, and polish it with a silk handkerchief or soft cloth. Snuff of candle, if quite free from grease, is an excellent polish for looking-glass.

MACKINTOSH, TO REPAIR A

Shred finely some pure indiarubber, and dissolve it in naphtha to the consistency of a stiff paste. Apply the cement to each side of the part to be joined, and leave a cold iron upon it until dry.

MAHOGANY, TO TAKE OUT MARKS FROM

The whitest stain left on a mahogany table by a jug of boiling water, or a very hot dish, may be removed by rubbing in oil, and afterwards pouring a little spirits of wine on the spot and rubbing dry with a soft cloth.

MARBLE, TO CLEAN

Mix with $\frac{1}{2}$ of a pint of soap-lees, $\frac{1}{2}$ of a gill of turpentine, sufficient pipe-clay and bullock's gall to make the whole into a rather thick paste. Apply it to the marble with a soft brush, and after a day or two, when quite dry, rub it off with a soft rag. Apply this a second or third time till the marble is quite clean.

MARBLE, TO CLEAN (Another Method)

Take two parts of soda, one of pumice-stone, and one of finely-powdered chalk. Sift these through a fine sieve, and mix them into a paste with water. Rub this well all over the marble, and the stains will be removed; then wash it with soap and water, and a beautiful bright polish will be produced.

MARBLE, TO REMOVE STAINS FROM

Make a paste of powdered pipe-clay and fullers'-earth; mix with strong soap lye; lay a thick coating of this paste on the marble, and pass lightly over it a moderately warm flat-iron until it is dry. Leave it for a short time, and then wash it off with clean water. If the marble be not entirely free from grease, repeat the process till every stain disappears. Discolourization by smoke may be removed in the same manner.

MOTHS, A PLEASANT PERFUME AND PREVENTIVE AGAINST

Take 1 oz. each of cloves, caraway-seeds, nutmeg, mace, cinnamon and Tonquin beans; add as much Florentine orris-root as will equal the other ingredients put together; grind the whole well to powder, and then put it in little bags among your clothes, etc. Almost anything aromatic will keep off moths. The common bog-myrtle, which grows so freely in swampy places, is an excellent antidote.

A piece of linen, moistened with turpentine and put into the wardrobe or drawers for a single day, 2 or 3 times a year, is also a sufficient preservative against moths.

MOTHS, PRESERVATIVES AGAINST THE RAVAGES OF

Place pieces of camphor, cedar-wood, Russia leather, tobacco-leaves, bog-myrtle, or anything else strongly aromatic, in the drawers or boxes where furs or other things to be preserved from moths are kept, and they will never take harm.

OIL PAINTINGS, TO CLEAN

Rub a freshly cut slice of potato damped in cold water over the picture. Wipe off the lather with a soft damp sponge, and then finish with lukewarm water, and dry and polish with a piece of soft silk that has been washed.

ONIONS, TO REMOVE THE SMELL OF, FROM THE HANDS

Rub well with celery or parsley.

PAINT, TO CLEAN.

Dirty paint should never be wiped with a cloth, but the dust should be loosened with a pair of bellows, and then removed with a dusting-brush. If very dirty, wash the paint lightly with a sponge or soft flannel dipped in weak soda-and-water, or in pearlash and water. The sponge or flannel must be used nearly dry, and the portion of paint gone over must immediately be rinsed with a flannel and clean water; both soda and pearlash if suffered to remain on, will injure the paint. The operation of washing should therefore be done as quickly as possible, and two persons should be employed: one to follow and dry the paint with soft rags, as soon as the other has scoured off the dirt and washed away the soda. No scrubbing-brush should ever be used on paint.

PAINT, TO DISPERSE THE SMELL OF

Place some sulphuric acid in a basin of water and let it stand in the room where the paint is. Change the water daily.

PAPER HANGING, TO MAKE PASTE FOR

Mix flour and water to the

consistency of cream, and boil. A few cloves added in the boiling will prevent the paste going sour.

PLATE, RAGS FOR

Boil soft rags for 5 minutes (nothing is better for the purpose than the tops of old cotton stockings) in a mixture of new milk and hartshorn powder, in the proportion of 1 oz. of powder to a pint of milk; as soon as they are taken out wring them for a moment in cold water, and dry before the fire. With these rags rub the plate briskly as soon as it has been well washed and dried after daily use. A most beautiful deep polish will be produced, and the plate will require nothing more than merely to be dusted with a leather or a dry, soft cloth before it is again put on the table.

PLATE, TO CLEAN

Wash the plate in a strong lather of common yellow soap and boiling water to remove all grease and wipe it quite dry; then mix as much hartshorn powder as will be required into a thick paste, with cold water or spirits of wine; smear this lightly over the plate with a piece of soft rag, and leave it to dry. When perfectly dry, brush it off quite clean with a soft plate-brush and polish the plate with a dry leather. If the plate be very dirty or much tarnished, spirits of wine will be found to answer better than the water for mixing the paste.

PLATE, TO CLEAN (Another Method)

Mix to a paste $\frac{1}{2}$ lb. of prepared chalk with 2 dr. of spirits of camphor, 1 dr. of ammonia, 1 oz. of turpentine and a dessertspoonful of spirits. When the silver is washed and dry, dab on the paste with a sponge and leave it to dry before brushing off.

POMADE

Take the marrow out of a marrow bone, place it in warm water, heat almost to boiling point, then let it cool and pour the water away. Repeat this three times, until the marrow is thoroughly "fined," then beat the marrow to a cream with a silver fork, stir $\frac{1}{2}$ pint of oil in drop by drop, beating all the time; when quite cold, add

4 pennyworth of citronella, pour into jars and cover down.

POMADE (Another Method)

Beat up $\frac{1}{4}$ of a lb. of unsalted lard well; then add 2 pennyworth of castor-oil, and mix thoroughly together with a knife, adding a few drops of any scent that may be preferred. Put the pomatum into pots, which keep well covered to prevent it turning rancid.

POMATUM

Mix 8 ozs. of olive-oil, 1 oz. of spermaceti, 3 pennyworth of essential oil of almonds, and 3 pennyworth essence of lemon together, and store away in jars for use.

POMATUM (Another Method).

Wash $1\frac{1}{2}$ lb. of lard well in elder-flower water; drain, and beat it to a cream. Mix $\frac{1}{2}$ a pint of olive oil and $\frac{1}{2}$ a pint of castor oil together, and heat them sufficiently to dissolve 4 ozs. of spermaceti, which should be beaten fine in a mortar. Mix all these ingredients together with whatever kind of scent may be preferred; and whilst warm pour into glass bottles for use, keeping them well corked. The best way to liquefy the pomatum is to set the bottle in a saucepan of warm water. It will remain good for many months.

POWDER, VIOLET

Reduce 6 ozs. of the best starch to the very finest powder, and sift it through a piece of muslin; then rub into it 2 drachms of powdered orris-root. This powder can be tinted with rose-pink or a little stone-blue. It can also, if desired, be scented with a drop or two of any essential oil, viz., lavender, lemon, or attar of roses; but the simple ingredients are quite sweet enough, and best without any addition.

RIBBONS, TO CLEAN

Mix $\frac{1}{2}$ a pint of gin, $\frac{1}{2}$ a lb. of honey, $\frac{1}{2}$ a lb. of soft soap, $\frac{1}{2}$ of a pint of water together; then lay each breadth of silk upon a clean kitchen-table or dresser, and scrub it well on the soiled side with the mixture. Have ready three vessels of cold water; take each

piece of silk at two corners, and dip it up and down in each vessel, but do not wring it, and take care that each breadth has one vessel of quite clean water for the last dip. Hang it up dripping for a minute or two, then dab it in a cloth and iron it quickly with a very hot iron.

ROSES, ATTAR OF

The delicious perfume known by this name is a volatile oil, of soft consistency, nearly colourless, and which is for use dissolved in alcohol. The best quality is prepared at Ghazipoor, in Hindoostan. It is apt to be adulterated with sandal wood and other oils. In the spring of the year, the country about Ghazipoor is a vast garden of roses, and presents a most beautiful appearance. The flowers are gathered and steeped in stone jars filled with water. These are set out in the open air over-night, and early in the morning the essential oil is skimmed off. This is the *attar*, and the water is sold for "rose-water." Two hundred thousand well-grown roses are required to produce half an ounce of the attar; and this quantity, when manufactured, sells, if genuine, for about £12 at the English warehouses. It is very difficult, however, to obtain the genuine article, as even the original manufacturers adulterate it.

Fill a large earthen jar, or other vessel, with the leaves of rose-flowers picked over and freed from all dust and dirt. Pour upon them as much pure spring water as will cover them, and from sunrise to sunset, for 6 or 7 days in succession, set the vessel where it will receive the sun's rays. At the end of the third or fourth day a number of particles of a fine yellow oily matter will float on the surface, which, after a day or two, will gather into a scum. This is the attar of roses. It must be taken up as often as it appears, with a piece of cotton wool tied to a stick, and squeezed from this into a small phial, which must be kept corked and tied over.

ROSES, MILK OF

An Invaluable Wash for Sunburns, Freckles, etc.).

Beat 2 ozs. of blanched almonds to a

fine paste in a mortar, then add 12 ozs. of rose-water gradually, so as to make an emulsion. Have ready 2 drachms of soap, 2 drachms each of white wax and oil of almonds and reduce to a liquid in a covered jar near the fire. Work the mixture gradually into the mortar with the emulsion; strain the whole through a fine muslin and add 1 drachm of oil of bergamot, 15 drops of oil of lavender, and 8 drops of attar of roses, which should previously have been mixed with 3 ozs. of rectified spirits.

A cheaper preparation of milk of roses may be made by using 1 oz. of blanched almonds, 5 ozs. of rose-water, 1 oz. of spirits of wine, $\frac{1}{4}$ a drachm of Venetian soap, 2 drops of attar of roses, beating the almond in a mortar to a paste, then the soap in the same way, and mixing them, adding the rose-water and spirit; after which the mixture should be strained, and the scent added.

RUST, TO PRESERVE FROM

Make a strong paste of fresh lime and water, and with a fine brush smear it as thickly as possible over all the polished surface requiring preservation. By this simple means, all the grates and fire-irons in an empty house may be kept for months free from harm, without further care or attention.

RUST, TO REMOVE

When bright grates are once neglected, small rust-spots begin to show themselves, which a plain leather will not remove; the following method of cleaning them must then be resorted to:—First: thoroughly clean with emery-paper; then take a large smooth pebble from the road sufficiently large to hold comfortably in the hand, with which rub the steel backwards and forwards one way, until the desired polish is obtained. It may appear at first to scratch, but continue rubbing, and the result will be success.

SATIN, WHITE AND SILK, TO CLEAN

Pin the breadths on a soft blanket; then take some stale breadcrumbs, and mix with them a little powder-blue. Rub this thoroughly and carefully

over the whole surface with the hand or a piece of clean linen; shake it off and wipe with soft cloths. Satin may be brushed the way of the nap with a clean, soft hair-brush.

SCREWS WHEN RUSTED IN WOOD, TO LOOSEN

Pour a small quantity of paraffin round the top of the screw. When sufficient time has been allowed for the oil to sink in, the screw can be easily removed.

SILK, TO RENOVATE

Sponge faded silks with warm water and soap; then rub them with a dry cloth on a flat board; afterwards iron them on the *inside* with a smoothing iron. Old black silks may be improved by sponging with spirits. In this case, the ironing may be done on the right side, thin paper being spread over to prevent glazing.

SILK, TO TAKE STAINS FROM

Mix 2 ozs. of essence of lemon and 1 oz. of oil of turpentine together in a phial. Grease and other spots in silks are to be rubbed gently with a linen rag dipped in this mixture.

SILK, TO WASH

For a dress to be washed, the seams of a skirt do not require to be ripped apart, though it must be removed from the band at the waist, and the lining taken from the bottom. Trimmings or drapings, where there are deep folds, the bottom of which is very difficult to reach, should be undone so as to remain flat. A black silk dress, without being previously washed, may be refreshed by being soaked during twenty-four hours in soft, clear water, clearness in the water being indispensable. If dirty the black dress may be previously washed. When very old and rusty, a pint of gin or whisky should be mixed with each gallon of water. This addition is an improvement under any circumstances, whether the silk be previously washed or not. After soaking, the dress should be hung up to drain dry without being wrung. The mode of washing silks is this:—The article should be laid upon a clean smooth table. A

flannel just wetted with lukewarm water should be well soaped, and the surface of the silk rubbed one way with it, care being taken that this rubbing is quite even. When the dirt has disappeared, the soap must be washed off with a sponge and plenty of cold water, of which the sponge must be made to imbibe as much as possible. As soon as one side is finished, the other must be washed precisely in the same manner. Let it be understood that not more of either surface must be done at a time than can be spread perfectly flat upon the table, and the hand can conveniently reach; likewise the soap must be quite sponged off one portion before the soaped flannel is applied to another portion. Silks, when washed, should always be dried in the shade, on a linen horse, and alone. If black or dark blue, they will be improved if they are placed on a table when dry, and well sponged with gin or whisky, and again dried. Either of these spirits alone will remove, without washing, the dirt and grease from a black necktie or handkerchief of the same colour, which will be so renovated by the application as to appear almost new.

SMELLS, BAD, TO REMOVE

Place a jar of permanganate of potash in the vicinity of the obnoxious smell.

STARCH, COLD-WATER

Mix the starch to a smooth cream with cold water, then add borax dissolved in boiling water in the proportion of a dessertspoonful to a teacupful of starch.

STARCH, TO MAKE

Allow $\frac{1}{2}$ a pint of cold water and 1 quart of boiling water to every 2 tablespoonfuls of starch. Put the starch into a tolerably large basin; pour over it the cold water, and stir the mixture well with a wooden spoon until it is perfectly free from lumps and quite smooth. Then take the basin to the fire, and whilst the water is *actually boiling* in the kettle or boiler, pour it over the starch, stirring it the whole time. If made properly

in this manner, the starch will require no further boiling; but should the water not be boiling when added to the starch, it will not thicken, and must be put into a clean saucepan, and stirred over the fire until it boils. Take it off the fire, strain it into a clean basin, cover it up to prevent a skin forming on the top, and when sufficiently cool that the hand may be borne in it, starch the things. Many persons, to give a shiny and smooth appearance to the linen when ironed stir round two or three times in the starch a piece of wax-candle, which also prevents the iron from sticking.

STARCH, TO MAKE (Another Method)

Mix a teacupful of starch to a paste with warm water, adding about an inch of composite candle, 3 or 4 drops of turpentine, and a tiny piece of spermaceti, then pour into this boiling water, stirring all the while, till the starch becomes clear.

STONES, TO WHITEN.

Wash the surface with clean water, and let it dry; then rub it lightly over with a flannel dipped in a mixture of the following materials:—Boil 2 cakes of pipeclay, 2 tablespoonfuls of carbonate of lime, $\frac{1}{2}$ a pint of size and $\frac{1}{2}$ a pint of stoneblue-water, in 2 quarts of water. When the stones are dry, after this mixture has been applied, rub them with a dry flannel till they look well.

STOVES, BRIGHT, POLISH FOR

Mix 2 tablespoonfuls of turpentine and 2 tablespoonfuls of sweet oil together, stirring in sufficient emery-powder to make the mixture of the thickness of cream. Put it on with a piece of soft flannel; rub off quickly with another piece, then polish with a little emery-powder and clean leather.

TAR STAINS, TO REMOVE FROM THE HANDS, ETC.

Paraffin is the most efficacious remedy for this.

TOOTH-POWDER, ARECA-NUT

Reduce to a very fine charcoal $2\frac{1}{2}$

ozs. of areca nut, and pound as finely as possible another $\frac{1}{2}$ oz. in its raw state, then mix with 1 oz. of finely powdered cuttlefish bone, and flavour with cloves or cassia according to taste.

UMBRELLAS

An umbrella should not be folded up when it is wet. Let it stand with handle downwards so that the wet can run off the ends of the ribs instead of running towards the ferrule end and rusting that part of the umbrella.

VELVET, TO RENEW

Hold the velvet, pile downwards, over boiling water, in which two pennyworth of stone ammonia is dissolved, double the velvet (pile inwards) and fold it lightly together.

VINEGAR, AROMATIC

Mix.—Put 2 quarts of best vinegar, with 2 ozs. of each of sage, rosemary, mint, rue and wormwood, in a jar, and let it stand by the side of the fire for a week; then strain it, and add $\frac{1}{2}$ an oz. of spirits of wine.

WALL PAPER, TO CLEAN

If not very dirty, the paper of any room will be much improved by brushing it over in straight lines with a soft broom, covered with a clean soft cloth; if, however, the paper be much soiled, very stale bread is the best thing to clean it with. Cut a very stale quartern loaf into slices, and, in the lightest manner possible, wipe the paper with it in a downward direction. Clean about a yard at a time, all one way, and be careful to leave no marks. By this process very dirty paper-hangings may be made to look like almost new.

WINDOWS, RATTLING

Make some wooden wedges, and insert between sashes whenever the weather is rough.

WINES, TO BOTTLE

Having thoroughly washed and dried the bottles, provide corks which will be improved by being slightly

boiled, or at least steeped in hot water a wooden hammer or mallet, a bottling boot, and a squeezer for the corks. Bore a hole in the lower part of the cask with a gimlet, receiving the liquid stream which follows in the bottle and filterer, which is placed in a tub or basin. This operation is best performed by 2 persons, 1 to draw the wine, the other to cork the bottles. The drawer is to see that the bottles are up to the mark, but not too full, the bottle being placed in a clean tub to prevent waste. The corking-boot is buckled by a strap to the knee, the bottle placed in it, and the cork, after being squeezed in the press, driven in by a flat wooden mallet. As the wine draws near to the bottom of the cask, a thick piece of muslin is placed in the strainer, to prevent the viscid grounds from passing into the bottle. Use good corks, which may be known by their elasticity and the absence of large pores. They can be used again if removed without a corkscrew.

WINES, TO FINE

There are various methods of fining wines; eggs, isinglass, gelatine and gum Arabic are all used for the purpose. Whichever of these articles is used, the process is always the same. Supposing eggs (the cheapest) to be used:—Draw a gallon of wine and mix 1 quart of it with the white of 4 eggs, and stir with a whisk; afterwards, when thoroughly mixed, pour it back into the cask through the bung-hole, and stir up the whole cask in a rotary direction with a clean split stick inserted through the bung-hole. Having stirred it sufficiently, pour in the remainder of the wine drawn off, until the cask is full; then stir again, skimming off the bubbles that rise to the surface. When thoroughly mixed by stirring, close the bung-hole, and leave it to stand for 3 or 4 days. A cask of clarified wine will fine thirteen dozen bottles of port or sherry. The other clearing ingredients are applied in the same manner, the material being cut into small pieces, and dissolved in a quart of wine, and the cask stirred in the same manner.

INSURANCE

So many facilities exist for protection against the effects of calamity and dangers of almost every description, that there is really no excuse for the person whom disaster and risk shall find unready to meet at least the worst consequences thereof. Insurance is not a perfect remedy for all the ills to which human society is liable, but it goes far to mitigate many and completely to relieve others.

Life Assurance—for this is the term applied to life cases, the word "insurance" being used of all others—is a safe investment and also, when entered into young (say, at 21 years), a cheap one. Moreover, at marriage it should be regarded in the light of a duty for the breadwinner to make some provision for those left behind. A proposal may be made for a sum payable at death or for the like amount payable at a given age, with or without profits in either case. A policy payable at death is perhaps the best safeguard, but in choosing between the alternatives heed must be given to the circumstances of each case. Undoubtedly, the profit-sharing policy is preferable, and in mutual offices only those lives upon which the association cannot sustain loss are entitled to participate in the profits, which, of course, are not paid out but accumulate and are added to the sum assured. The premium with profit is necessarily more costly than one without. For example, to cite a quota-

tion in each class, £100 payable at death without profits, the age at which the policy was effected being 21, demands an annual premium of £1 14s. 9d., while with profits it would be £2 1s. 2d. The rates vary slightly, but these figures may be accepted as typical. Obviously, too, the younger the life the lighter is the premium. Therefore, insure early.

In *selecting an office*, there will be no difficulty in finding a good one, but an intending proposer should always make inquiries of a few friends. A well-established Company, the management of which is conducted on reasonably economical lines, will readily be found. It does not follow that Companies that advertise extravagantly are, on that account, any the sounder than others which carry on their business in a more sober fashion. The proposer must be prepared to tender *evidence as to age*, and sometimes it is not possible to produce a certificate of birth. In such event he must frankly state the nature of the evidence he is able to submit and ascertain, before making the proposal, whether the office will accept it or not. Let there be no mistake on this point, and let him see that the policy contains an "age admitted" clause, when he is unable to tender the indisputable testimony of a birth certificate. If one office will not accept the evidence, perhaps another may; hence, the advisability of finding out beforehand

whether it will be admitted by the office first approached, so that he may open negotiations with another without having to answer in the affirmative the question whether his life has ever been deferred or declined. This will be only one of a long series of questions which *must be answered truthfully*. The Company is bound to protect itself and, in point of fact, if it showed any disposition to admit a proposal too readily, this might, not unjustly, excite some suspicion in the proposer's mind. In quoting the names of one or two references, the client must be sure to nominate friends who really know something of his habits and life-history. The important point is to avoid doing or omitting to do anything that might invalidate the policy when claim should be made for its payment. It is essential that the proposer should learn what is the reputation of the Company in respect of the payment of claims. When satisfactory evidence of death and of legal title has been furnished it would be monstrous were the Company then to delay payment. The Company's character for immediate payment at the earliest possible date after the conditions mentioned have been complied with should, therefore, be investigated. Policy having been granted, it only remains for the holder to take care to keep up the annual payments and on no account to permit the limit of grace to lapse. The practice of excluding suicide, "death by the act of God" (as in earthquake or by lightning), and a few other needlessly harassing restrictions has been abandoned by most, if not all, offices of standing.

Fire Insurance.—The annual premiums are now so low that every householder who fails to protect his goods and chattels is guilty of culpable negligence. It is prudent to insure the rent and taxes as well as the furniture, for theoretically the tenant of a house destroyed by fire might be called upon to pay the rent while it was being rebuilt. The rates of offices are alike in respect of fire proposals. Two shillings per £100 of value insured is the customary charge. One need not wait until one's house is burned

down before reaping the benefit of a fire policy, for this will cover any article that has been burned by a pure accident. Naturally such claims will be inquired into by the Company and must, therefore, be made in good faith.

Burglary and Theft are two of the bugbears of the householder's life and both may be deprived of most of their terrors by means of insurance. Nearly all offices undertake this line of business, and the premium rates are so extremely modest that one should certainly enjoy, if not the immunity from visitation, at least the sense of security which the policy affords. The minimum payment of 5s. a year insures the client—subject to reasonable conditions and up to a specified sum—against burglary, housebreaking and larceny, including theft by servants, with privilege to the insured to leave his house unoccupied for a period of sixty days in the year. It may be helpful to mention that by "burglary" is meant theft by forcible entry at night, by "housebreaking," theft by forcible entry by day, and by "larceny," theft without forcible entry, even by persons who may be lawfully on the premises.

There are numerous other forms of insurance, all of more or less importance to the community, but one more kind of peculiar interest to householders calls for specific mention. When it appeared that, under the Workmen's Compensation Act, 1906, *domestics* might demand compensation for accident, incurred whilst in discharge of their duties, from their employers, a feeling akin to panic ran through nearly every household in the land. Insurance against this risk practically allayed that fear which threatened to undermine family peace and composure. Thus suppose one domestic be employed, an annual premium of 2s. 6d. will secure her mistress in the matter of compensation, while an extra 2s. 6d. will cover medical attendance on the girl up to £5, and full wages for one month. If, in addition, the harmless necessary *charwoman* be occasionally employed, a humble half-crown yearly will secure protection in her case, too.

JAMS, PICKLES & SAUCES

JAMS

APPLE AND BLACKBERRY JAM

Pick 2 lbs. of blackberries, put them into a stewjar with 1 lb. of preserving sugar, and let them remain thus for at least 12 hours. When ready, place the jar on the stove or in a cool oven, and stew gently until the juice is extracted. Pare, core and cut 4 lbs. of apples into thick slices. Put them into a preserving pan, strain in the juice, add $3\frac{1}{2}$ lbs. of preserving sugar, and boil gently from 45 to 50 minutes. Pour into jars, cover closely, and store in a dry, cool place.

BLACK CURRANT JAM

To each lb. of fruit allow 1 lb. of loaf sugar, and $\frac{1}{2}$ of a pint of water. Remove the fruit, which should be ripe and perfectly dry, from the stalks, put it into a preserving-pan with the water, bring to boiling point, and simmer gently for 20 minutes. Add the sugar, and boil for about $\frac{1}{2}$ an hour from the time the jam re-boils, or until a little almost immediately sets when tested on a cold plate. Towards the end of the process the jam must be stirred almost continuously, to prevent it boiling over or sticking to the bottom of the pan. Pour into pots, at once cover closely, and store in a cool, dry place.

ORANGE MARMALADE

Slice 12 Seville oranges and 2 lemons thinly, removing inner pith and pips. Weigh it, and to each lb. add 3 pints of cold water. Let the whole remain covered in an earthenware vessel for 3 days, then turn the preparation into a preserving-pan and boil gently until quite tender. Let it cool, weigh again, and to each lb. of fruit add 1 lb. of

sugar. Bring to boiling point, skim well, and cook gently until the syrup stiffens quickly when tested on a cold plate. Turn into pots, cover with paper brushed over on both sides with white of egg, and store in a cool, dry place.

RHUBARB JAM

To each lb. of rhubarb allow 1 lb. of preserving sugar, $\frac{1}{4}$ a teaspoonful of ground ginger, and the finely-grated rind of $\frac{1}{4}$ a lemon. Remove the outer stringy part of the rhubarb, cut it into short lengths, and weigh it. Put it into a preserving-pan with sugar, ginger, and lemon-rind in the above proportions, place the pan by the side of the fire, and let the contents come very slowly to boiling point, stirring occasionally meanwhile. Boil until the jam sets quickly, when tested on a cold plate. Pour it into pots, cover closely, and store in a cool, dry place.

PICKLES

CABBAGE, PICKLED RED

Remove the outer leaves of 1 good firm red cabbage, quarter it, remove the centre stalk, and cut each section across into very fine strips. Pile the shredded cabbage on a large dish, sprinkle it liberally with salt, and let it remain thus until the following day. Meanwhile boil 1 quart of vinegar, $\frac{1}{2}$ an oz. of whole pepper and $\frac{1}{2}$ oz. of allspice together, the latter being tied together in a piece of muslin, and allow the preparation to become quite cold. Turn the cabbage into an earthenware or enamelled colander, and when well drained put it into a large jar, and pour in the vinegar. It will be fit for use in 3 or 4 days; if kept for any length

of time it loses the crispness and colour which are its chief recommendations.

MIXED PICKLES

To each pint of vinegar add 2 tablespoonfuls of sherry, 1 teaspoonful of salt, $\frac{1}{2}$ a teaspoonful of pepper, a good pinch of cayenne. Peel and slice an equal weight of mild onions, sour apples and cucumbers thinly, put them into wide-necked bottles, add the seasoning and sherry, cover with vinegar, and cork closely. This pickle may be used the following day, and should not be kept for any length of time.

ONIONS, PICKLED

To each quart of vinegar, add 2 teaspoonfuls of allspice, 2 teaspoonfuls of whole black pepper. Have the pickling onions gathered when quite dry and ripe, and, with the fingers, take off the thin outside skin; then with a silver knife (steel should not be used, as it spoils the colour of the onions), remove one more skin, when the onions will look quite clear. Have ready some very dry bottles or jars, and as fast as the onions are peeled put them in. Pour over sufficient cold vinegar to cover them, with pepper and allspice in the above proportions, taking care that each jar has its share of the latter ingredients. Tie down with the bladder, and put them in a dry place, and in a fortnight they will be ready for use.

WALNUTS, PICKLED

Wipe the green walnuts with a dry cloth, put them into wide-necked bottles, or unglazed jars, and cover them with cold vinegar. Cover closely, let them stand in a cool, dry place for 4 months, then drain off the vinegar. To 3 pints of vinegar allow 1 oz. of salt and $\frac{1}{2}$ an oz. each of allspice, peppercorns, cloves and whole ginger. Boil as much fresh vinegar as will cover them, with the seasonings as stated above, and pour it, while boiling hot, over the walnuts. Cover closely, and store for 3 weeks in a cool, dry place; the walnuts will then be ready for use.

SAUCES

HARVEY SAUCE

Cut 3 anchovies each into 3 or 4 pieces, place them in a wide-necked

bottle or unglazed jar, add a finely-chopped shallot, 1 finely-chopped clove of garlic, 1 tablespoonful of walnut ketchup, 1 tablespoonful of soy, $\frac{1}{2}$ of an oz. of cayenne, a few drops of cochineal, 1 quart of good vinegar, and cover closely. Let the jar stand for 14 days, during which time the contents must be either shaken or stirred at least once a day. At the end of this time strain into small bottles, cork them securely, and store the sauce in a cool, dry place.

TOMATO SAUCE.

To each quart of tomato pulp allow 1 pint of chilli vinegar, $\frac{1}{2}$ of a pint of soy, 1 tablespoonful of anchovy essence, 2 finely-chopped shallots, 1 finely-chopped clove of garlic, salt to taste. Bake the tomatoes in a slow oven until tender, rub them through a fine sieve, and measure the pulp. Put it into a stewpan, add the rest of the ingredients, simmer until the shallots and garlic are quite tender, and pass the whole through a tammy or fine hair sieve. Store in air-tight bottles.

WORCESTER SAUCE

Put into a large bottle 1 quart of best brown vinegar, 6 tablespoonfuls of walnut ketchup, 5 tablespoonfuls of essence of anchovy, 4 tablespoonfuls of soy, $\frac{1}{2}$ a teaspoonful of cayenne, 4 very finely-chopped shallots, salt to taste, and cork it closely. Shake it well 3 or 4 times daily for about 14 days, then strain the sauce into small bottles, cork them tightly, and store in a cool, dry place.

WALNUT KETCHUP

The walnuts must be very young and tender. Bruise 100 of them slightly, put them into a jar with 3 ozs. of salt and 1 quart of good vinegar and, let them remain for 8 days, stirring them daily. Drain the liquor from them into a stewpan, add to it 4 ozs. of anchovies, 12 finely-chopped shallots, $\frac{1}{2}$ a stick of finely-grated horseradish, $\frac{1}{2}$ a teaspoonful each of mace, nutmeg, ground ginger, ground cloves, and pepper, and 1 pint of port, simmer very gently for 40 minutes, and when quite cold, strain the preparation into small bottles. Cork them closely, cover with melted wax, and store in a cool, dry place.

KITCHEN WORK

Cleanliness is the most essential ingredient in the art of cooking; a dirty kitchen being a disgrace both to mistress and maid. Be clean in your person, paying particular attention to the hands, which should always be clean. Constant washing of the hands and thorough drying not only keeps them softer and whiter, but prevents them chapping in cold weather.

Do not go about slipshod. Provide yourself with good, well-fitting boots. You will find them less fatiguing in a warm kitchen than untidy slippers.

Provide yourself with at least a dozen good-sized, serviceable cooking aprons, made with bibs. These will save your gowns, and keep you neat and clean. Have them made large enough to nearly meet behind.

Never waste or throw away anything that can be turned to account. In warm weather any gravies or soups that are left from the preceding day should be just boiled up, and poured into clean pans. This is particularly necessary where vegetables have been added to the preparation, as it then so soon turns sour. In cooler weather, every other day will be often enough.

Every morning, visit the larder, change dishes and plates when necessary, empty and wipe out the bread-pan, and have all straight by the time your mistress comes down to order the dinner. Twice a week the larder should be scrubbed out.

In hot weather keep fish and meat covered with wire screens or muslin to keep off flies. A large porous flower-pot wrapped in a wet cloth and turned over the butter will keep it firm.

In cooking, clear as you go; that is to say, do not allow a host of basins, plates, spoons, and other utensils to

accumulate on the dressers and tables whilst you are engaged in preparing the dinner. By a little management and forethought, much confusion may be saved in this way. It is as easy to put a thing in its right place when it is done with, as it is to keep continually moving it, to find room for fresh requisites. For instance, after making a pudding, the flour-tub, rolling-pin, and the paste-board, should be put away, and any basins, spoons, etc., taken to the scullery, neatly packed up near the sink, to be washed when the proper time arrives. Neatness, order, and method should be observed.

Much time is saved by putting all pots and pans away clean and ready for use, and all meat and other food should be placed on clean dishes or plates before being consigned to the larder.

Never let your stock of spices, salt, seasonings, herbs, etc., dwindle down so low that, some day, in the midst of preparing a large dinner, you find yourself minus a very important ingredient, thereby causing delay.

If you live in the country, have vegetables gathered from the garden at an early hour, so that there is ample time to search for caterpillars, etc. These disagreeable additions need never make their appearance on table if the vegetable in its raw state is allowed to soak in salt and hot water for an hour or so.

Be very particular in cleansing all vegetables free from grit.

When you have done peeling onions, wash the knife at once, and put it away to be cleaned, and do not use it for anything else until it has been cleaned.

After you have washed saucepans, fish-kettle, etc., stand them before the fire for a few minutes, to get thoroughly

dry inside, before putting them away. They should then be kept in a dry place, in order that they may escape the deteriorating influence of rust, and thereby be quickly destroyed. Never leave saucepans dirty from one day's use to be cleaned the next; it is slovenly and untidy. Be careful that the lids are kept clean, a dirty cover will often spoil the flavour of a dish.

Empty soups or gravies into a basin as soon as they are ready; never allow them to remain all night in the stock-pot.

In copper utensils, if the tin has worn off, have it immediately replaced.

Pudding-cloths and jelly-bags should be well washed, scalded, and hung up to dry. Let them be perfectly aired before being folded up and put in the drawer.

After washing up the dishes, wash the dish-tubs with a little soap, water and soda, and scrub them often. Wring the dishcloth, after washing this also, and wipe the tubs out. Stand them up to dry after this operation. The sink-brush and sink must not be neglected. Do not throw anything but water down the sink, as the pipe is liable to get choked, thereby causing expense and annoyance to your mistress.

Do not be afraid of hot water in washing up dishes and dirty cooking utensils. As these are essentially greasy, lukewarm water cannot possibly have the effect of cleansing them effectually.

Clean your coppers with turpentine and fine brick-dust, rubbed on with flannel, and polish them with a leather and a little dry brick-dust.

Clean your tins, with soap and whiting, rubbed on with a flannel, and polish with a dry leather and powdered whiting. Mind that neither the cloth nor leather is greasy.

Do not scrub the inside of your frying-pans, unless they be of enamelled iron, as, after this operation, any preparation fried is liable to catch or burn to the pan. If the pan has become black inside, rub it with a hard crust of bread, and wash in hot water, mixed with a little soda. It is a good plan to have one regular day in the week

upon which every culinary utensil should have a thorough cleaning.

Punctuality is a quality indispensable in a cook; therefore always have a good clock in the kitchen.

If you have a large dinner to prepare, much may be got ready the day before, and many dishes are a 'great deal better for being thus made early. To soups and gravies this remark is particularly applicable. Make out the bill of fare the day before, and see immediately what you can commence upon.

KITCHEN MAXIMS

"There is no work like early work."

"A good manager looks ahead."

"Clear as you go: muddle makes more muddle."

"Not to wash plates and dishes soon after using makes work."

"Spare neither soda nor hot water in washing up greasy articles."

"Dirty saucepans filled with hot water begin to clean themselves."

"Wash well a saucepan, but clean a frying-pan with a piece of bread."

"Never put the handles of knives into hot water."

"Thrust an oniony knife into the earth to take away the smell."

"Search for the insects in greens before putting them in soak."

"Green vegetables should be boiled fast with the lid off."

"Bread or vegetables left in stock turn it sour."

"Baked meat should start in a hot oven."

"When pastry comes out of the oven, meat may go in."

"Fish boiled, should be done slowly, with a little vinegar in the water."

"A spoonful of vinegar will set a poached egg."

"Water boils when it gallops, oil when it is still."

"A stew boiled is a stew spoiled."

"Take away nearly all fat before making a stew."

"Save all pieces of fat to melt down for frying or pastry."

"Only dry frying can be done without plenty of fat."

"Pour boiling water over frying fat to clarify it, and set it aside for using again."

"Melt a teaspoonful of fat in a frying-pan before putting in bacon."

"Put spare crusts in the oven to grate for breadcrumbs."

"Pare potatoes as thinly as possible."

"Salt or cold water makes scum to rise."

"Scum as it rises in boiling should be taken off."

"Salt brings out flavours."

"A handful of salt will clear the fire."

"Salt meat should go into cold water and be brought slowly to the boil."

"Make the tea directly the water boils."

"Pour nothing but water down the sink."

"When washing-up is over for the day, wash the tea-cloth; it saves the cloths and cleanses the hands."

TO PREVENT WASTE

When fuel and food have been procured, the next consideration is, how the latter may be best preserved, with a view to its being suitably dressed. Much waste is often occasioned by the want of judgment or of necessary care in this particular. In the absence of proper places for keeping provisions a hanging safe, suspended in an airy situation, is the best substitute.

A well-ventilated larder, dry and shady, is better for meat and poultry which require to be kept for some time.

In favourable weather (that is, when the atmosphere is cool, clear, and dry) *beef* may be kept to advantage from two to four days; *mutton*, under the same circumstances, may, with care, be kept still longer, and will hang for some time without deterioration. When the atmosphere is at all thick and moist, meat will soon turn. It should then be wiped every day with a cloth.

Veal, lamb and pork ought not to be kept more than a day or two.

Though it is advisable that animal food should be hung up in the open air till its fibres have lost some degree of their toughness, yet, if it is kept till it loses its natural sweetness, its flavour has become deteriorated. As soon, therefore, as the slightest trace of putrescence is detected, it has reached its highest degree of tenderness, and

should be dressed immediately. During the sultry summer months it is difficult to procure meat that is not either tough or tainted. It should, therefore, be well examined when it comes in, and if flies have touched it, the part must be cut off, and the remainder well washed.

Fish, with the exception of salmon and turbot, should be cooked as fresh as possible. Salmon and turbot will be improved if kept for a day or so. Flat fish generally do not spoil so soon as most other kinds.

In very cold weather, meat and vegetables touched by the frost should be brought into the kitchen early in the morning, and soaked in cold water.

Great care should be taken that nothing is thrown away or suffered to be wasted in the kitchen which might, by proper management, be turned to a good account. The shank-bones of mutton, so little esteemed in general, give richness to soups or gravies, if well soaked and crushed before they are added to the boiling. They are also particularly nourishing for sick persons. Roast-beef bones, or shank-bones of ham, make excellent stock for pea-soup. When the whites of eggs are used for jelly, confectionery, or other purposes, a pudding or a custard should be made, that the yolks may be used.

All things likely to be wanted should be in readiness: sugars of different sorts; currants washed, picked, and perfectly dry; spices pounded, and kept in very small bottles closely corked, or in canisters. Much waste is always prevented by keeping every article in the place best suited to it.

Vegetables keep best on a stone floor, if the air be excluded; meat in a cold, dry place; as also salt, sugar, sweetmeats, candles, dried meats, and hams. Rice, and all sorts of cereals for puddings, should be closely covered to preserve them from insects; but even this will not prevent them from being affected by these destroyers, if they are long and carelessly kept. Pears and grapes should be strung, and hung up in a cold, dry place. Apples should be laid on straw, after being carefully wiped, and should not touch each other.

THE LAWYER AT HOME

MOST men—and women too—in the course of their domestic life find themselves, from time to time, called upon to deal with matters in respect to which they experience a certain amount of difficulty, owing to a want of knowledge as to their legal rights and duties.

It is with a view to meeting the difficulty in which the ordinary householder is thus placed, that the following information is given; though, in the limited space available, it is not possible to do more than state the general principles with regard to the subjects which are dealt with.

ANIMALS

In the case of domesticated animals the owner's liability is limited to the natural consequences of their escape; for instance, if his cattle stray he will be responsible for the grass they eat or trample on. In considering the question as to what may be the natural consequences of their escape, regard must be had to their natural habits. Thus it is the recognized habit of horses to kick one another, and for such consequences the owner will be liable. But it is not supposed to be the general habit of horses to kick human beings, nor of dogs to attack mankind; and for that reason the owner of such animals is not responsible if they in fact do so, unless either he or his servant in charge of the animal knew that it had previously done or attempted to do so.

An exception has been made by a statute which provides that the owner shall be liable for any injury done by a dog to cattle or sheep, and that it shall not, in such cases, be necessary for the person whose cattle, etc., have been injured to show a previous mischievous propensity in the dog, or the owner's knowledge of it, or that the injury was attributable to neglect on the part of the owner. "Cattle" includes a horse, whether in harness or otherwise. The occupier of the premises where the dog is kept or permitted to remain at the time of the injury will be deemed to be the owner of the dog unless he prove that he was not, and that it was kept, etc., without his

sanction or knowledge. If a dangerous dog is not kept under control a magistrate may, upon complaint to him, order it to be kept under control, or to be destroyed. When reasonable steps have been taken to get rid of a stray dog which has come on the premises the occupier will not be liable for the injury it may do.

A person may be fined and, under certain circumstances, imprisoned, for bringing a dog into Great Britain from any other country except Ireland, the Channel Islands and the Isle of Man, unless its landing is authorized by a licence previously obtained from the Board of Agriculture.

Unlawfully and maliciously killing or wounding a dog, or other animal kept for domestic purposes, is a criminal offence. But the killing or wounding of such animal will be justifiable if not done maliciously but in the belief that it was necessary for the protection of person or property, and that it was the only means of protection. In resorting to this remedy it must be remembered that unless there be no other reasonable means of protecting the person or property, liability to an action for damages may also be incurred.

Poisoning of Animals.—Placing poisoned meat for the purpose of destroying animals is a criminal offence, except it be to destroy animals such as rats or other small vermin, either in a building or in the garden or drains attached to it, or in a rick or stack of corn or cultivated vegetable produce.

In the case of a drain, it must be so protected as to prevent any dog from entering it.

BILLS OF SALE

A bill of sale is a document transferring, either absolutely, or by way of security for a debt, the property in personal chattels from the owner to some other person, whereby the latter has power either with or without notice, immediately or at a future time, to seize or take possession of the goods. A bill of sale by way of security cannot be given in consideration for a sum under £30.

If the bill of sale is absolute, the right to seize the goods is governed by the terms of the document. But if it be given by way of security only, the right is limited to the following causes:—

1. Default in payment of the sum secured at the time provided, or in the performance of any covenant contained in the bill of sale and necessary for maintaining the security.
2. Bankruptcy of the grantor or the taking of any of the goods in distress for rent, rates or taxes.
3. Fraudulent removal of the goods by the grantor.
4. Failure without reasonable excuse, upon demand in writing, to produce the last receipt for rent, rates and taxes.
5. Execution levied upon the goods of the grantor under a judgment against him.

Moreover, in the case of a bill given by way of security, the goods if seized must not, without the assent of the grantor, be removed or sold until after five clear days from the date of seizure; and during such five days it is open to the grantor to apply to the Court for relief.

A pledge differs from a bill of sale in that it immediately transfers the possession of the goods. And where goods are supplied under an agreement on the hire-purchase system, a licence to seize them in default of payment of instalments does not make the document a bill of sale, for until completion of the payments the person in whose possession the goods are has no property in them to transfer.

A bill of sale should be made by

deed; and, if given by way of security, must be made in, or in substantial accordance with, the form prescribed by statute, to which must be annexed a schedule containing an inventory of the chattels assigned. The form referred to is as follows:—

This Indenture made the ... day of one thousand nine hundred and Between of of the one part and of of the other part. Witnesseth that in consideration of the sum of £..... now paid to by the receipt of which the said hereby acknowledges he the said doth hereby assign unto his executor administrators and assigns all and singular the several chattels and things specifically described in the schedule hereto annexed by way of security for the payment of the sum of £..... and interest thereon at the rate of .. per cent. per annum. And the said doth further agree and declare that he will pay to the said the principal sum aforesaid together with the interest then due by equal payments of £..... on the ... day of and the ... day of and the said doth also agree with the said that he will at all times during the continuance of this security insure and keep the said chattels and things insured against loss or damage by fire in the sum of pounds at the least and will pay all rent to become due and payable by him in respect of the premises on which the said chattels and things or any of them now are. Provided always that the chattels hereby assigned shall not be liable to seizure or to be taken possession of by the said for any cause other than those specified in section seven of the Bills of Sale Act (1878) Amendment Act 1882. In witness whereof the parties to these presents have hereunto set their hands and seals the day and year first above written.

Signed and sealed by the said in the presence of me.....

(Add witness's name, address and description)

THE SCHEDULE

Every bill of sale is required to be (1) attested, (2) registered, and (3) to have the consideration for which it is given truly set forth.

(1) **ATTESTATION.**—An absolute bill of sale must be attested by a solicitor. The execution of a bill of sale given by way of security must be attested by one or more credible witnesses who are not parties to such bill.

(2) **REGISTRATION.**—This is effected by presenting at the Bills of Sale Registry, High Court of Justice, Strand, the original bill, with the schedule or inventory (if any), and also a true copy of the bill including the schedule or inventory and the attestation, together with an affidavit of the time of the making of the bill of sale, and of its due execution and attestation and a description of the residence and occupation of the person by whom it was given, and of every attesting witness. The copy of the bill and the affidavit must be filed with the registrar. The original bill must be stamped at the time it is thus presented. The bill must be thus registered within seven clear days after its execution.

The registration must be renewed once at least every five years, otherwise it will become void.

(3) **STATEMENT OF THE CONSIDERATION FOR WHICH GIVEN.**—If the consideration be stated to be the loan of £50, this substantially describes the payment of £25 to the grantor and the payment, by his direction, of a debt of £25 due from him. But a statement that the bill was given for £50 would be an untrue statement of the consideration if it was in respect to an advance of £40 and a sum of £10 deducted for expenses and bonus for the loan.

An absolute bill of sale is good as between the grantor and the person to whom it is given, notwithstanding its non-compliance with the formalities prescribed by statute; but it is void as against a trustee in bankruptcy or under an assignment for the benefit of creditors, or an execution creditor, in respect of chattels comprised in the bill of sale, which, after seven days from the making or giving of the bill, are found in the

possession or apparent possession of the grantor.

A bill of sale given by way of security is void as against all persons if it is given for a sum under £30, or contains a power to seize the goods for any cause other than those specified in the Bills of Sale Act, or is not in accordance with the statutory form. If not attested or registered, or if the consideration be untruly set forth, it is void as a security. With regard to goods purported to be assigned but not specifically described in the schedule, and with regard to goods of which the grantor was not the true owner at the time the bill was executed, the bill will be void except as against the grantor.

The Act dealing with bills of sale does not require the name of the grantor to be stated at all.

The only case in which a wrong name can be made available for the purpose of invalidating the registration of a bill of sale, is where it is combined with a description which, although inaccurate, would, nevertheless, not be misleading if the name were correct, but is made insufficient and misleading when combined with an erroneous name.

A bill of sale affords the holder no protection against seizure of the goods by the grantor's landlord as distress for rent. Nor does it prevent the sale and disposal of trade goods in the ordinary course of business. And in the case of a bill of sale given by way of security, the goods are liable to be distrained on for payment of rates and taxes.

COUNTY COURT

An action may be brought, or proceedings taken, in the County Court in respect to any of the following matters:

The recovery of a debt, where the claim does not exceed £100, whether on balance of account or otherwise.

The recovery of damages, except for libel, slander, seduction, or breach of promise of marriage, where the claim does not exceed £100.

The recovery of a legacy or a share in the estate of a person who has died

intestate, where the amount claimed does not exceed £100.

The recovery of premises, provided that the value or rent of the property does not exceed £100 a year. It is open, however, to the opposite party, within one month after the action is commenced, to apply to the High Court for an order to have the case tried in the High Court, on the ground that the title to other property of greater annual value than £100 would be affected by the decision in such action.

Any action in which the title to land or any right or interest therein is involved may be tried in the County Court, provided that the value or rent of such land does not exceed £100 a year. And if in any action the title to property exceeding the above amount incidentally comes in question, the Court has power to decide the claim which it is the immediate object of the action to enforce, if both parties consent in writing signed by them or their solicitors; but such decision will not be evidenced as to the title in any other matter.

The County Court has also jurisdiction—

To administer the estates of deceased persons, and trusts, where the value of the property to be administered, or the trust estate, does not exceed £500.

To deal with the foreclosure or redemption of mortgages or to enforce any charges where the mortgage or charge does not exceed £500.

In actions for specific performance, ratification, cancellation or delivery up of any agreement for the sale, purchase or lease of any property where the purchase-money or the value of the property in the case of a lease does not exceed £500.

In proceedings relating to the maintenance or advancement of infants where the value of the infants' property does not exceed £500.

In actions for the dissolution or winding-up of any partnership where the value of the partnership property does not exceed £500.

In actions for relief against fraud or mistake in which the damage sustained or the property in respect of

which relief is sought does not exceed £500.

FIRE

With regard to fires which are incident to the natural use of the premises, such as the ordinary fires in a house, or in a field for the purpose of burning weeds, liability only attaches where there has been a want of reasonable care. If, therefore, a person's property is injured in consequence of a fire on his neighbour's premises, he will not be able to recover any damages from him if the fire was the result of an accident or is incapable of being traced to any source.

Where, however, the use of fire cannot be considered as incident to the ordinary use of the premises, the person who introduced it will be liable for its consequences. Thus, where a locomotive or traction-engine is used on a road, the person by whom it is used will be liable for any fire which may be caused by it.

If, within the Metropolitan Police district, the chimney of any house or other building be on fire, the occupier will be liable, irrespective of any question as to negligence, to a penalty not exceeding 20s.; but if he proves that he has incurred the penalty by reason of the neglect or wilful default of another, he may, by summary process, recover the amount from such other person.

If any chimney accidentally catches fire within borough or urban districts, the occupier will be liable to a penalty not exceeding 10s., unless he prove to the satisfaction of the magistrate that the fire was in no wise owing to omission, neglect or carelessness of himself or his servant. Any person who wilfully sets, or causes to be set, on fire any chimney is made liable to a penalty not exceeding £5, and in addition may be indicted for felony.

HIRE-PURCHASE AGREEMENTS

Goods obtained on the hire-purchase system remain the property of the person who supplied them until payment of the final instalment of the sum agreed upon.

In the absence of any provision to

the contrary, failure to pay an instalment entitles the person who supplied the goods to retake possession of them, and sue for any instalments then overdue.

Goods thus obtained are liable to be distrained upon for rent by the landlord, but cannot be seized by an execution creditor of the hirer.

HUSBAND—Liability of, for Debts contracted by Wife

Marriage does not, in itself, give a wife authority to pledge her husband's credit. A husband is only liable where it can be shown that the circumstances were such that the wife must be considered as having had his authority to act as his agent. A husband's authority for his wife to act as his agent may be either expressed, implied or ostensible.

If it can be proved that such authority was, in fact, given, the husband will, of course, be liable.

Where the husband and wife are living together, the presumption is that the wife has authority to pledge her husband's credit for necessities suitable to the position in which the parties live. A husband is not liable provided that he has done nothing to justify the tradesman in looking to him for payment. Likewise, even if the husband has not expressly prohibited his wife from pledging his credit, but has made her an allowance for the purpose of obtaining the necessities, or if she is already sufficiently provided with them, the presumption of authority to act as his agent will be rebutted.

On the other hand, an express prohibition against pledging his credit will not prevent his wife from doing so for the bare means of subsistence, if not in fact provided by him.

Where the parties are living apart, the presumption is that the wife has no authority to pledge her husband's credit, unless and until the contrary be shown. And a husband is not bound to give to a tradesman with whom he has dealt for ready money during the time he and his wife have lived together notice of his separation from her and the consequent revocation of her ordinary authority. But

it is otherwise if he has during such period authorized her to deal with such tradesman on credit, or ratified such dealings by subsequent payment.

Notwithstanding, however, that the parties are living apart, if the wife has been compelled to do so through the cruelty or misconduct of her husband, or has been deserted by him, and is without adequate means, she has an absolute right to pledge her husband's credit for necessities either for the maintenance of herself or any of the children in her charge (including any by a former marriage).

Such right to pledge her husband's credit will cease if a decree for the payment of alimony has been made against her husband, or a weekly sum has been ordered to be paid to her upon the application which she is entitled to make to the justices under the circumstances in question, and the alimony, or weekly payment, has been paid regularly. It will also cease if she be guilty of adultery.

Similarly, where the parties are living apart by mutual agreement but the husband having agreed to pay an allowance neglects to do so, and where there is no agreement as to an allowance but the wife has not undertaken to provide for herself and the husband has failed to make her a reasonable allowance, the wife, if without adequate means, has the same right to pledge his credit as in the case where she is compelled to leave him.

Even if the wife had no actual authority, the husband will be liable for debts incurred by her if he allowed her to represent herself as having his authority, and the person supplying the goods honestly acted in reliance on her having that authority.

HUSBAND AND WIFE

A husband may obtain a divorce from his wife if she be guilty of adultery. But a wife cannot obtain a divorce from her husband if he commit adultery unless such adultery be accompanied by desertion or such conduct towards her as the law regards as cruelty, except where he has been guilty of bigamy or certain other offences which cannot here be dealt with. She may, however, if the Court

think fit, be granted a decree of judicial separation where the husband has been guilty of adultery or cruelty by itself, and she is entitled to such decree if he has deserted her for two years without reasonable excuse.

By recent Acts it is^a provided that where a husband—

(1) Has been convicted summarily before the magistrates of an aggravated assault on his wife; or (2) has been convicted, upon an indictment, of assault upon her, and been sentenced to pay a fine of more than £5 or to a term of imprisonment exceeding two months; or (3) has deserted his wife; or (4) has been guilty of persistent cruelty to her, or wilful neglect to provide reasonable maintenance for her or her infant children, whom he is legally liable to maintain, and has by such cruelty or neglect caused her to live apart from him; or (5) is an habitual drunkard, the wife may apply to any Court of Summary Jurisdiction acting within the city, borough, or petty sessional division, or other division or district, in which any such conviction took place, or in which the cause of complaint wholly or partially arose; and upon such application the Court may make an order containing any of the following provisions:—

1. That the applicant be no longer bound to cohabit with the husband
2. That the legal custody of any children of the marriage while under sixteen be committed to the applicant;
3. That the husband shall pay to the applicant personally or, for her use, to any officer of the Court or third person on her behalf, such weekly sum, not exceeding £2, as the Court may consider reasonable;
4. That the applicant, or the husband, or both of them shall pay the costs of the Court and such reasonable costs of either of the parties as the Court may think fit.

No order can be made if it be proved that the wife has committed an act of adultery, unless the husband has condoned or connived at it, or by his wilful neglect or misconduct conducted to it.

If any sum ordered to be paid be not paid, it may be recovered by distress on the husband's goods; and if there be no sufficient distress, he may be

committed to prison for any term not exceeding three months.

On the application of either party, and upon fresh evidence, the order may, at any time, be altered or discharged. And if the wife voluntarily resumes cohabitation with the husband or commits adultery the order will be discharged.

Where the wife is an habitual drunkard the husband may apply to a Court of Summary Jurisdiction, and the Court may make an order, as in the case of an application made by a wife against her husband, or instead of ordering that the applicant be no longer bound to cohabit with his wife, the Court may, with the consent of the wife, order her to be detained, for a period not exceeding twelve months, in any retreat licensed under the Inebriates Acts, the licensee of which is willing to receive her.

INFECTIOUS DISEASES

Every local authority is invested with power to enforce the cleansing and disinfection of premises, and the disinfection or destruction of bedding, clothing, or other articles, which have been exposed to infection from any dangerous infectious disorder.

—If any person knowingly casts, or causes or permits to be cast, into any ash-pit any rubbish infected by a dangerous infectious disease, without previous disinfection, he will be liable to a fine not exceeding £5; and, if the offence continues, to a further fine not exceeding 40s. for every day during which it continues after notice of the above provision is given to the master of the house by the Sanitary Authority.

Any person who knowingly lets any premises in which a person has been suffering from a dangerous infectious disease, without having the premises, and all articles liable to retain infection, disinfected to the satisfaction of a legally qualified medical practitioner or such articles destroyed, will be liable to a fine not exceeding £20.

Any person letting, or showing for the purpose of letting, any premises who, on being questioned by any person negotiating for the hire of them, as to the fact of there being, or within six weeks previously having been,

therein any person suffering from a dangerous infectious disease, knowingly makes a false answer to such question, will be liable to a fine not exceeding £20, or to imprisonment.

Where a person ceases to occupy any premises in which a person has within six weeks previously suffered from any dangerous infectious disease, and either—

- (a) Fails to have such premises and all articles therein liable to retain infection disinfected to the satisfaction of a legally qualified medical practitioner, as testified by a certificate signed by him, or such articles destroyed; or
- (b) Fails to give the owner, or master of the house notice of the previous existence of such disease; or
- (c) On being questioned by the owner or master, or by any person negotiating for the hire of such premises, as to the fact of there having within six weeks previously been therein a person suffering from any dangerous infectious disease, knowingly makes a false answer,

he will be liable to a fine not exceeding £10.

If any person while suffering from a

dangerous infectious disease wilfully exposes himself, without proper precautions against spreading the disease, in any street, public place, shop, or inn; or being in charge of any person so suffering, thus exposes such sufferer; or gives, lends, sells, transmits, removes or exposes, without previous disinfection, any bedding, clothing, or other articles which have been exposed to infection from any such disease, he will be liable to a fine of £5.

Any person who while suffering from a dangerous infectious disease enters a public conveyance, and any person who knowingly places such person therein, is liable to a fine of £10. Outside the London County Council area the penalty is £5, and is limited to cases where no proper precautions are taken, and the driver or conductor is not informed of the existence of any infection.

The Medical Officer of Health must be immediately notified of the existence of any infectious disease, by any person considered by the Law to be responsible.

Every medical practitioner attending the patient is also required to send a similar notice. Failure to send the notice required involves a penalty not exceeding 40s.

INTESTATES' ESTATES.

These tables are compiled on the assumption that there are no relatives other than those mentioned and are those applicable in England.

In Scotland the distribution is on a slightly different basis.

PERSONAL PROPERTY

If a person die Intestate, leaving

The Estate is divided in the following manner:—

Widow and child or children	{	One-third to widow, two-thirds to children in equal shares. The issue of deceased children take amongst them their deceased parent's share.
Widow and father	{	Half to widow. Half to father.
Widow and mother, no father	{	Half to widow. Half to mother.
Widow, brothers or sisters	{	Half to widow. Half equally amongst brothers and sisters, whether of the whole or half blood; the issue of a deceased brother or sister take amongst them their deceased parent's share.
Widow, mother, nephews or nieces	{	Half to widow. One-fourth to mother. One-fourth to nephews and nieces <i>per stirpes</i> .

Husband, with or without children . . .	All to husband.
Father, brothers and sisters . . .	All to father.
Mother, brothers and sisters . . .	All equally.
Mother, but no other kin . . .	All to mother.
Child, children or grandchildren by deceased child . . .	<div> <div> Amongst children in equal shares, the grandchildren by deceased children taking amongst them their deceased parent's share. </div> </div>
Brother or sister, and nephews or nieces . . .	<div> <div> Amongst brothers or sisters in equal shares, the children of deceased brothers or sisters taking amongst them their deceased parent's share. </div> </div>
Brother or sister, and grandfather . . .	All to brother or sister.
Brother or sister, and uncles or aunts . . .	All to brother or sister.
Grandfather, no nearer relation . . .	All to grandfather.
Father's father, and mother's mother . . .	Equally to both.
Grandmother, uncles, and aunts . . .	All to grandmother.
Great-grandfather, uncles and aunts . . .	Equally <i>per</i> individual.
Uncles and aunts . . .	All equally.
Uncle, and deceased uncle's child . . .	All to uncle.
Uncle by mother's side, and deceased uncle or aunt's child . . .	All to uncle.
Aunts, nephew and niece . . .	All equally.
Cousins . . .	Equally <i>per</i> individual.
Nephew by brother, and nephew by half-sister . . .	Equally <i>per</i> individual.

REAL PROPERTY

No illegitimate child is entitled to inherit real estate.

Wife and child or children, and children of a deceased child . . .	<div> <div> One-third to wife for life in any case. Rest to eldest son or his issue, such son and his issue, whether male or female, being preferred to any other son and his issue, and all sons and their issue, whether male or female, being preferred to all daughters and their issue, whether male or female. </div> <div> If no son, rest to daughters equally. </div> </div>
Wife and father . . .	<div> <div> If daughters and grandchildren (sons and daughters of deceased daughter), rest to daughters and eldest son of deceased daughter. </div> </div>
Wife and mother . . .	<div> <div> One-third to wife for life ; rest to father, if deceased purchased same, or had it left him by will. </div> </div>
Wife, brother or sister, and children of a deceased brother or sister . . .	<div> <div> One-third to wife for life ; rest to mother, there being no heirs on father's side. </div> <div> One-third to wife for life in any case, rest to eldest brother or his issue. </div> </div>
Wife, mother, nephews and nieces . . .	<div> <div> Sister and children of deceased sister, rest equally between sister and nephew (eldest). </div> <div> Sisters and nieces, only, children of deceased sister, rest equally between sisters and nieces, nieces taking <i>per stirpes</i>. </div> </div>
Wife, mother, nephews and nieces . . .	<div> <div> One-third to wife for life ; rest to nephew (eldest), or nieces, if brother left no son. </div> </div>

Wife, mother, brother, sisters, and nieces (children of deceased brothers and sisters)	{	One-third to wife for life in any case; rest to eldest brother. Rest to nieces, equally, if children of elder brother deceased.
No wife or child or issue of a deceased child		Lineal ancestor paternal, males of whole blood first.
Children by one or more wives, and the issue of deceased children	{	All to eldest son, or his issue.
		Daughters equally.
		Husband for life; afterwards to only child or to eldest son or issue of a deceased eldest son.
Husband and child or children	{	If all daughters, to them equally.
Mother, but no wife, child, or issue of a child, father, brother, sister, nephew or niece, or more distant descendants of father	{	All to mother in default of lineal ancestors on the father's side, or issue of such ancestors.
Mother, and brothers and sisters		All to eldest brother.
Mother and sisters		All to sisters.

Note.—Leaseholds are Personal Property.

JURY

Remuneration.—In the High Court a special juror is entitled to a guinea, and a common juror receives 1s. for each case in which he is sworn. In the County Court the payment is 1s. Though there is no special provision as to payment, a coroner's juror usually receives a small fee. No fees are payable in criminal cases.

Jury.—A juror who fails to attend will, in the absence of a satisfactory excuse, be liable to the payment of such penalty as the Court may think fit, but limited in the case of a coroner's juror to £5.

LANDLORD AND TENANT

TENANCIES are usually either for three years, or for seven, fourteen, or twenty-one years.

A tenancy "for a year" expires at the end of the twelve months. A tenancy "for a year certain and so from year to year" is a tenancy for two years at least. Where premises are taken at an annual rent, or upon other terms from which a yearly tenancy may be inferred, it is a tenancy from year to year. But if there are no words from which a yearly tenancy is to be inferred, and the rent is payable quarterly, monthly, or weekly, there will be a QUARTERLY, MONTHLY OR WEEKLY TENANCY, as the case may be.

A TENANCY AT WILL is an occupation of premises with the assent of the

owner and at his will. If it be by express agreement, the character of the tenancy is not affected by the payment of rent; but if such tenancy be only implied, payment and acceptance of rent will raise the presumption of a yearly tenancy.

Where a person continues in possession after his term has expired without any assent or dissent by his landlord, he is said to be a TENANT ON SUFFERANCE. If, however, the landlord assents to such person remaining on, a "tenancy at will" will be presumed; which, upon payment and acceptance of rent, will become a yearly tenancy upon the terms of the original lease.

Tenancies How Created.—A LEASE FOR NOT MORE THAN THREE YEARS from the making may, if accompanied by the giving and taking possession of the premises, be made verbally, though it is very undesirable. An agreement to grant a lease to be subsequently made cannot be enforced unless in writing, even though the intended lease be for less than three years.

A LEASE FOR MORE THAN THREE YEARS must be by deed. But if the parties have come to a definite agreement in writing, the document, is valid as "an agreement for a lease." The parties not unfrequently make an express agreement to grant and take a lease to be subsequently prepared. Such an agreement must be stamped

as if it were a lease, a merely nominal stamp being required on the actual lease when subsequently executed.

In the case of *furnished* houses or apartments there is an implied condition that the premises are reasonably fit for the purposes of habitation. This only applies, however, to the condition of the premises at the commencement of the tenancy. The fact that the landlord actually resides on the premises makes no difference. Thus, if one of the landlord's family develops scarlet fever during the tenancy, the tenant has no redress for any injury he may sustain in consequence. But if a contagious disease or defective drains exist, or noxious insects infest the premises at the commencement of the tenancy, the tenant may, on discovering the fact, immediately leave the premises and repudiate the agreement, unless he comes to terms with the landlord that the defect shall be made good. He may also recover damages for any expenses to which he has been put in consequence of the breach of the implied undertaking. In the letting of an *unfurnished* house there is, in the absence of agreement, no undertaking that it is fit for habitation.

And, notwithstanding that in the absence of agreement there is no obligation on the landlord to remedy a defect which renders the house unfit for habitation, nevertheless if the defect is of a structural character and amounts to a nuisance or a danger to health, the tenant may procure the intervention of the sanitary authority, and thus throw the burden of remedying the defect on the landlord, provided the tenant himself has not by the terms of his lease undertaken to bear such expenses.

Covenants.—IMPLIED COVENANTS.—In the letting of premises the tenant, on his part, is under an implied covenant to pay the rent, and to use the premises in a fair and reasonable manner, but he is under no obligation to do substantial or general repairs. In the case of a tenancy for a term of years, the obligations of the tenant are, defined by special agreement.

"USUAL COVENANTS."—Where an agreement is entered into for a lease

to be subsequently executed but no thing is said as to covenants, or it is stated to be subject to the "usual" covenants, the only covenants that can be insisted upon are the following:—

1. *By the tenant.*—To pay the rent; to pay tenants' usual rates and taxes; to keep and deliver up the premises in repair; to allow the landlord to enter and view the state of repair. 2. *By the landlord.*—That the tenant shall not be disturbed in his possession of the premises either by the landlord or by any person claiming under him.

EXPRESS COVENANTS.—The following covenants are often stipulated for:—

That the tenant—Shall not assign or underlet the premises or any part thereof; shall not use the premises otherwise than as a dwelling-house; will insure the premises.

The covenants which have been referred to will be found dealt with under their respective heads.

1. **Covenant to pay Rent.**—The fact that the premises have been destroyed by fire or other inevitable accident will not relieve the tenant from his obligation to pay rent, unless otherwise expressly provided. Where there is a proviso that the rent shall be suspended in the event of fire, flood, storm, tempest, or "other inevitable accident," only such accidents as are of a similar nature to a fire, or flood, etc., are included.

2. **Covenant to pay Rates and Taxes.**—In the case of furnished houses or apartments and flats, the rates and taxes are paid, as a rule, by the landlord. In leases for a term of years, the payment of rates and taxes is usually the subject of express agreement, under which the tenant is generally made liable for something more than "tenants' usual rates and taxes." And unless particular attention is paid to the wording of the covenant, very onerous conditions are sometimes imposed upon the tenant of a house in an urban district.

TENANTS' USUAL RATES AND TAXES.—Unless otherwise provided, the following are payable by the tenant—Poor rates (except in tenancies for not more than three months); inhabited house duty; county, borough and highway rates; general district rates and improvement rates; water and gas rates.

It may be "otherwise provided" either expressly, or indirectly, as, for instance, where a tenant undertakes to pay a *net* rent—that is, a rent of a specified amount clear of all deductions.

The landlord is liable for payment of the Landlord's Property Tax—which is collected from the tenant, but deducted from the next payment of rent—and the Tithe rent charge; but where there exists an agreement dating from prior to the Act of 1891, the tenant must pay the landlord the value of the tithe.

RATES AND TAXES PAYABLE BY LANDLORD, UNLESS OTHERWISE AGREED.—The following are primarily payable by the landlord, but may, by agreement, be made payable by the tenant:—Land tax; sewers rates; special assessments under local Acts for the purpose of permanent improvements.

3. **Covenant to Repair.**—The extent of a tenant's responsibility necessarily depends on the wording of the particular covenant; but a general undertaking to repair is satisfied by the tenant keeping the premises as nearly as possible in the same condition as that in which they were when he became tenant of them, allowing for the necessary deterioration caused by time and the effects of the climate. In tenancies for not more than three years, the usual provision is that the tenant shall keep the premises in good and tenantable repair. The obligation to keep the premises in "good tenantable repair" is to keep them in such repair, as would make it reasonably fit for the occupation of a person of the class who would be likely to take it.

In the absence of special agreement, there is no obligation on the landlord to do any repairs. Even if the premises become uninhabitable through want of repair, the tenant must nevertheless pay his rent; and if he sustains any personal injury through the defective condition of the premises the landlord will not be responsible.

Where, however, premises are let in flats, the landlord is responsible for the condition of the stairs, which remain in his possession and control; and his liability extends not only towards his tenants but also towards such persons as may in the ordinary

course of business make use of the stairs. Where the landlord fails to clear the gutters he is liable for the damage sustained in consequence by any one of his tenants. Where injury is caused to a tenant of such premises by an escape of water, which has been laid on for his benefit as well as that of the other occupants, the landlord is not responsible in the absence of negligence.

If the landlord has, in fact, undertaken to do repairs, he is under no responsibility until notice has been given him of the want of repair: that he had the means of knowing is not sufficient. If the landlord fail to do the repairs after notice, his only remedy is to sue for damages for breach of covenant.

Where a landlord lets a house in a defective condition and agrees to repair it, but neglects to do so, the landlord is liable to the tenant.

4. **Covenant to allow the Landlord to enter and view the State of Repair.**—In the absence of agreement, the landlord has no right to enter the premises except in the case of agricultural holdings—in respect to which the right to do so is now given him by statute.

5. **Covenant not to Assign or Under-Let the Premises or any part thereof without the Assent of the Landlord.**—Unless the lease is expressly made determinable upon breach of such covenant, and the landlord determine it accordingly, an assignment though made without his assent will not be invalid; but the person to whom the assignment has been made will himself be bound by the terms of the lease. Where the assent is required to be in writing, the tenant cannot safely act upon an assent given verbally.

In the absence of express agreement, no fine or sum of money in the nature of a fine can be obtained by the landlord in respect to his licence or assent.

A covenant against assignment only does not prevent the tenant from under-letting, unless the covenant forbids an assignment for the whole or any part of the term.

6. **Covenant by Tenant not to use the Premises otherwise than as a Private House.**—The use of the premises either

as a day school or boarding school, or as an art studio for instruction of pupils, or as an office for the receipt of orders, or the exhibition of goods for sale, will constitute a breach of the above covenant.

7. Covenant to Insure the Premises.—On a breach of this covenant the tenant is, if there has been no loss, liable for the cost of effecting the necessary insurance; but if there has been a loss, the damages recoverable from him will be the value of that which ought to have been insured. In the absence of express agreement, the landlord is under no obligation to lay out any money he has received from his insurers in reinstating the premises. Where the tenant has insured, the landlord can compel the Insurance Company to thus apply the money.

8. Covenant by Landlord for Quiet Enjoyment of the Premises by the Tenant.—The object of this covenant is to protect the tenant against a disturbance of his possession. Where such covenant is only implied its application is limited to disturbance by the landlord or some person claiming a right to the premises through him. In the case of a trespass, the only remedy is against the wrongdoer, at the instance of the tenant.

If the landlord lets certain rooms in a house under a covenant for quiet enjoyment, he cannot let other rooms over them to another tenant for dancing and entertainment without committing a breach of the covenant.

Upon a breach of covenant by the tenant, the landlord may bring an action against him for damages, or he may, in cases where the lease contains a proviso for re-entry on the breach of any covenant, treat such breach as a ground for forfeiture of the lease. With regard, however, to *covenants other than those by which the tenant undertakes to pay rent or not to assign or underlet*, the landlord cannot enforce the right of re-entry, by action or otherwise, unless he has served upon the tenant a notice in writing, and the tenant has failed to comply with such notice within a reasonable time. Even then, it is open to the tenant in such cases to apply to the Court for relief against forfeiture.

Where a lessee obtains relief from forfeiture the lessor is entitled to recover from him, all reasonable costs and expenses properly incurred by the lessor in the employment of a solicitor and surveyor or valuer, or otherwise, in reference to any breach giving rise to a right to re-entry or forfeiture.

With regard to the *breach of a covenant for non-payment of rent*, if an action is brought for forfeiture, the tenant may stay proceedings by tendering or paying into Court the rent and costs.

Unless the lease provides for re-entry on non-payment of rent, "whether the same be demanded or not," the landlord or his agent must make a formal demand for the rent, on the premises, at a convenient time before, and at, sunset on the day on which the rent becomes due. But if not less than half a year's rent has become due, and there is no sufficient distress to be found on the premises, the landlord may bring an action of ejectment, without having made any formal demand. In the case of a *covenant not to assign or sub-let*, no notice is required to be given prior to the exercise of the right of re-entry, and no relief from forfeiture can be obtained except in favour of an under-lessee who, after making all practical inquiries, had no reason to suppose that the landlord's consent to his under-lease was necessary.

Except in the case of a forfeiture on the ground of half a year's rent being in arrear and no sufficient distress being found on the premises, the acceptance of rent, or a distress for the same, amounts to a waiver of the right to re-enter.

Rent.

WHEN DUE AND PAYABLE.—As a general rule the time at which rent is payable is stated in the lease. Where, however, no time is specified and the rent is expressed to be a yearly rent, that is to say, at so much a year, it is not payable till the expiration of the year, unless otherwise expressly provided. As a general rule in residential occupations the rent is made payable quarterly, and on the recognized quarter days. In the case of a quarterly, monthly, or weekly tenancy it is, of

course, payable at the end of the quarter, etc.

PAYMENT IN ADVANCE.—Rent is sometimes, by special agreement, made payable in advance, and if so it becomes due in advance and can be recovered accordingly. But unless it is expressly so stipulated, there is risk in paying rent in advance, for if the landlord has mortgaged or assigned his reversion in the premises, the payment of rent in advance to the landlord will not prevent the mortgagee or assignee from claiming it over again at the time it properly becomes due, provided he has, at any time prior to that date, given notice to the tenant to pay it to him.

Distress.

WHEN CAPABLE OF BEING MADE.—Distress may be levied between sunrise and sunset on any day (other than Sunday) after that on which the rent became due; and without any previous demand for the rent. It cannot be levied after the issue of a writ to enforce forfeiture; and in cases where the tenant continues in possession after the end of the tenancy, it can only be levied within six months after that date.

The rent recoverable is limited to six years' arrears, or in the case of agricultural holdings, one year's rent only.

Distress can only be levied by the landlord himself or by some person authorized in writing by a county court judge, or registrar, to act as a bailiff.

Entry for the purpose of levying distress can only be effected by means of an open, or, if closed, an unfastened door, or by an open window or other open means of access. It cannot be effected by breaking open an outer door to any premises, or by unfastening or opening any window or skylight which is closed.

If the rent and costs be not paid or tendered, goods sufficient to meet the tenant's liability may be seized, and for this purpose inner doors may be broken open. Notice that the goods have been seized is then given, and an inventory is made and handed to the tenant. Provided that the goods have been actually

impounded it is not necessary that any one on the landlord's behalf should be left in possession.

Any balance that remains from the sale should be left in the hands of the sheriff or under-sheriff of the county, or the constable of the place, for the owner's use, or paid to the tenant.

Distress may, subject to the exceptions given below, be levied upon any goods on the premises in respect to which the rent is payable, whether they belong to the tenant or other persons; but cannot be levied on goods elsewhere except by agreement, and except in cases where the tenant has fraudulently removed any of his goods for the purpose of evading distress.

GOODS EXEMPT FROM DISTRESS ARE :

—1. Things affixed to the premises, e.g. a chimney-piece, or an anvil in a blacksmith's shop. 2. Goods delivered to the tenant in the way of his trade, e.g. a horse sent to be shod. A picture sent to an artist to be altered would not be protected, as an artist is not a trader. 3. Goods of a perishable nature, among which wine is not included. 4. Things in actual use, e.g. a horse that is being actually ridden. 5. Loose money. 6. Wearing apparel, bedstead and bedding, and tools to the value of £5, except where the tenant's term has expired, rent has been demanded, and distress made not less than seven days after such demand. 7. Goods belonging to a lodger, provided he has complied with certain requirements; and 8. In cases where there are other goods of sufficient value and immediately available to answer the distress tools and implements of trade, not otherwise exempt as being within class 6 above.

Fraudulent Removal of Goods by the Tenant for the Purpose of Evading Distress.—Where a tenant, after the rent becomes due fraudulently, removes from the premises any of his goods which are liable to be distrained on, the landlord may within thirty days after such removal seize the goods wherever they are to be found, provided they have not before such seizure been sold to any person not privy to such fraud. The tenant and also any person party to the fraud is liable to

an action for double the value of the goods removed.

If the tenant complains that the distress was illegal or irregular, or was excessive there are various remedies open to him; in resorting to which he should be careful to take legal advice at the earliest possible moment, as the procedure is technical and complicated.

Notice to Quit.—Where the premises have been let for a definite period, the tenancy terminates at the end of that period without any notice on either side. In other cases it can only be determined by notice. In the absence of agreement or local custom to the contrary, the length of notice required is as follows:—In the case of a weekly, monthly or quarterly tenancy a reasonable notice is necessary; at any rate, a week's, or month's, or quarter's notice, as the case may be, expiring at the end of a week or month, etc., will be sufficient.

Where there is a yearly tenancy, six months' notice, or in the case of an agricultural holding, twelve months' notice, expiring at (or before) the time of year at which the tenancy commenced.

Where a tenant enters in the middle of a quarter, it may be that it is definitely agreed that the tenancy shall commence at the time of entry; but if such is not the case, and the tenant by agreement pays a proportionate rent for the broken quarter and thenceforward on the usual quarter days, the tenancy will be deemed to commence on the first of such quarter days. A tenancy for a year and so on from year to year can only be determined by a six months' notice, expiring at the end of the second or some subsequent year (in the case of an agricultural holding, twelve months).

Holding over by Tenant after Notice Given.—In any case where a tenant holds over after notice to leave given by himself, he is liable for double rent; and where a tenant from year to year or for a term of years wilfully holds over after the expiration of his term, and a written demand for possession has been given by the landlord, he is liable for double the actual rental value of the premises. Where the tenancy is terminated by a notice to quit from the landlord, the notice to quit is in

itself a sufficient demand for possession. Such double value is recoverable by action as a debt, and such double rent is recoverable either by action or by distress leviable as in the case of ordinary rent.

WHERE THE TENANCY ENDS OR IS DETERMINED BY NOTICE TO QUIT.—If the tenant refuse to deliver up possession, the landlord's remedy is to bring an action of ejectment in the High Court, in which there is a summary form of procedure available under such circumstances, or in cases where the annual value or the rent of the premises does not exceed £100, he may proceed in the County Court either by an action of ejectment or by an action for the recovery of possession, the latter being a more summary method and applicable to small holdings. And in the case of a holding at a rental not exceeding £20 a year, for any term not exceeding seven years, the landlord may give the tenant a statutory notice that unless within seven days of such notice the premises are given up to him, he will apply to two justices of the peace (or to the stipendiary magistrate in a town), and on such application the justices (or magistrate) may, if the claim be proved, issue to the constables of the district a warrant commanding them, within a period to be named (but not less than twenty-one, nor more than thirty, days from the date of the warrant), to enter, by force if necessary, and give possession to the landlord.

Forfeiture for non-payment of rent.—

Unless the lease provides for re-entry on non-payment of the rent, "whether the same be demanded or not," proceedings for ejectment cannot be taken unless a formal demand has been made. Both in the High Court and in the County Court provision is made for the speedy recovery of possession in cases of forfeiture for non-payment of rent.

Fixtures, Removal of, by Tenant.

WHAT ARE FIXTURES.—That which is attached to the soil so as to become part of the freehold, or is affixed to an original building so as to be incorporated in it, is deemed to be "a fixture." That it rests on the ground is not, in itself, sufficient; for instance, if

a conservatory be erected upon dwarf walls, with a wooden course or coping upon which the conservatory stands, the structure down to and including the wooden course is not a fixture.

TENANTS' RIGHT TO REMOVE LIMITED TO CERTAIN CASES.—That which is, in fact, a fixture cannot, in the absence of agreement or custom to the contrary, be removed by the tenant at the end of his term, if put up either by the landlord, or by a previous tenant, or by the tenant himself during a previous tenancy; nor can the tenant remove it even if put up by him during his tenancy, unless it be within one or other of the exceptions given below. 1.

Fixtures for trade purposes: Thus a gardener may remove all the plants which form his stock-in-trade, and his glass-houses. 2. Fixtures for agricultural purposes the right of removal with regard to which, in the case of ordinary agricultural holdings, has been the subject of special statutes. 3. Fixtures merely for the purpose of ornament or convenience. The right to remove them is not, however, absolute, but subject to the condition that they have not been affixed in such a manner as to indicate an intention that they should form part of the premises, and is dependent on their being capable of removal without causing a substantial injury to the premises.

Where the tenant, being entitled to do so, removes a fixture, he must make good any damage done in the removal; and when a fixture has been put up by the tenant in place of something originally affixed to the premises, he must, after taking down his own fixture, replace the former article or another of a similar kind.

TIME WITHIN WHICH RIGHT OF REMOVAL MUST BE EXERCISED.—The tenant's right to remove fixtures is strictly limited to the continuance of the tenancy. After the tenancy has expired, or been terminated by forfeiture, he cannot legally remove them without the landlord's consent; but if the landlord then permits their removal, he thereby relinquishes all claim to them. If the outgoing tenant sells his fixtures to the incoming tenant, and the latter fails or refuses to pay for

them, the outgoing tenant is in the same position as in any other case where he fails to remove them before the expiration of the tenancy.

A tenant assigning his tenancy, should take care to obtain by deed, from the person to whom he assigns proper covenants for indemnity, in case of their nonfulfilment.

An under-letting for the whole residue of the term granted to the tenant is equivalent to an assignment, and has the same consequences. But an under-letting for the residue of the term less any period—even one day—secures a reversion to the person under-letting, and creates the relation of landlord and tenant between the parties.

An under-tenant is under no *direct* liability to a superior landlord. But he is, of course, liable to be ejected by the superior landlord if the original lease be forfeited for breach of any covenant therein, unless he can get relief against such forfeiture upon application to the Court.

LICENCES

Dogs over six months old may be kept only under license. The penalty for keeping a dog without a licence is £5; and every person in whose charge or possession, or in whose house or premises a dog is found or seen, will be deemed to be the person who keeps it, unless the contrary be proved.

If a person has been detected keeping a dog without a licence he cannot by subsequently obtaining one in the course of the same day, protect himself against the penalty, payable in respect to his past offence, for a licence only commences at, and from the time of the day when actually issued.

Such licences are obtainable at any Postal Money Order Office, and must be renewed on January 1 each year.

DUTY PAYABLE 7s. 6d.

Game Licence.—Subject to certain exceptions and exemptions, no person is entitled to take or kill or assist in the taking or killing, or to use any dog, gun, net or other instrument for the purpose of taking or killing any game whatever, or any woodcock, snipe, quail, or landrail, or any rabbits or any deer, unless he has previously

obtained what is known as a game licence; and if he does so he will be liable to a penalty of £20.

If a person is discovered doing any act in respect to which a game licence is required, he may be required to produce his game licence and permit it to be read, and a copy taken if desired. If he cannot produce it, he may be required to give his name and address, and state the place at which he alleges he took out the licence. If he wilfully refuses to give the necessary information he will be liable to a penalty of £20.

DUTY PAYABLE.—The following is the rate of duty payable in respect to game licences, which are obtainable at any Postal Money Order Office:—

Where licence taken out after July 31, and before November 1—	£	s.	d.
To expire on July 31 in the following year	3	0	0
To expire on October 31 in the same year in which the licence is taken out . . .	2	0	0
Where licence is taken out on or after November 1—To expire on July 31 following	2	0	0
Where taken out at any time of the year for a continuous period of 14 days only	1	0	0

Where the excise duty payable for keeping a male servant has been paid in respect to a servant employed as a gamekeeper, the person who so employs him may take out a game licence on his behalf, on payment of the duty of £2 for the year ending July 31. And if such servant leaves within the year for which the licence was granted, and another keeper is appointed, the licence may be renewed on behalf of the latter, free of duty, for the remainder of the year, by obtaining the endorsement of the proper excise officer.

Gun Licences.—Subject to exceptions any person who uses or carries a gun elsewhere than in a dwelling house or the curtilage thereof is required, under a penalty of £10, to take out a licence yearly. Such licences are obtainable at any Postal Money Order Office, duty payable 10/-, and expire on July 31. A "gun" includes a firearm of any description, and an

air-gun or any other kind of gun from which any shot, bullet, or other missile can be discharged.

Pistols.—Any person who, being under the age of 18 and not exempt from a penalty for using or carrying a gun without a gun licence or a game licence, buys, hires, uses or carries a pistol, is liable to a penalty not exceeding 40s.

A "pistol" means a firearm or other weapon of any description from which any shot, bullet, or other missile can be discharged, and of which the length of barrel, not including any revolving, detachable or magazine breech, does not exceed 9 inches. An "antique pistol," however, is expressly excluded, but no pistol will be considered as such if ammunition is sold with it, or there is reasonable ground for believing that it is capable of being effectively used.

It should also be stated that it is unlawful to sell or let on hire a pistol to any person, unless at the time of sale or hire he produces a gun licence or a game licence, or gives reasonable proof that he is a person entitled to use or carry a gun without such licence, or that, being a householder, he purposes to use the pistol only in his own house or the curtilage thereof.

If any person contravenes any of the above provisions or knowingly makes, or causes to be made, any false statement as to any matter concerning which he is required to make a statement he will be liable to a penalty not exceeding £5.

LODGERS

The distinction between a "lodger" and an "under-tenant" is of importance for this reason: If the relation between the persons by whom, and to whom, respectively, the rooms or apartments are let is, in fact, that of landlord and tenant, the usual incidents of such relationship will attach; thus the payment to be made for the use of the rooms will be "rent" in the strict sense of the word, and will be recoverable by distress if not paid. Whereas, if the agreement between the parties merely amounts to a licence to use certain premises, the payment to be made for such right can only be enforced by action as an

ordinary debt. The best practical test is whether the person who let the rooms retained to himself the right of general control over the premises, though he need not himself live on the premises.

Every lodger is entitled to the use of the door bell and knocker, if any, the skylights or windows of the staircase, and of the water-closet, unless the agreement expressly stipulates to the contrary.

A reasonable notice must be given. In a monthly or weekly holding a month's or a week's notice respectively on either side would be sufficient.

A lodger's goods are liable to distress for rent due to the superior landlord from his immediate tenant, and, if necessary, in order to effect their seizure, the lodger's door may be broken open. The lodger, however, is now enabled by the Lodgers' Goods Protection Act to protect his goods, where a distress is levied or threatened to be levied, by serving on the superior landlord, or the bailiff, a declaration in writing and signed by him, stating that the immediate tenant has no right of property or beneficial interest in the furniture; that it is the property of, or in the lawful possession of the lodger, and also whether any rent is due from the lodger to his immediate landlord, and if any such rent is due, the amount and period for which payable. To this declaration a correct inventory, subscribed by the lodger, must be annexed. The lodger may then pay to the superior landlord, or bailiff, any rent which may be owing by him, or so much of it as may be sufficient to discharge the superior landlord's claim, and such payment will be deemed a valid payment on account of rent due from the lodger to his own landlord.

If the superior landlord sells the goods before the expiration of five days, the lodger may maintain an action for damages in respect to such illegal sale, whether he has made a declaration or not. Where, however, the sale takes place after the expiration of the five days, the sale is lawful.

MARRIAGE

Marriage is permissible in law

between any persons not within the prohibited degrees of relationship which are set forth at the end of the Prayer Book. Inasmuch as there can be no marriage between such persons, any children of such union are illegitimate, and are, therefore, not entitled to inherit their parents' property. Their parents may, of course, provide for them by will; but even then such offspring will have to pay legacy duty at the same rate as entire strangers. Where the parents intend to thus provide for their offspring they must describe them specifically in their wills, for the expression "children," when used in a will, only includes legitimate children, unless on the face of the will there is a clear indication to the contrary.

Marriage in England or Wales is not permitted until the necessary authority has been obtained in one or other of the following ways:—

I. By Publication of Banns.—Banns must be published for three Sundays preceding the marriage in the parish church of the parish in which each party dwells.

The marriage must be solemnized within three months after the publication of the banns, otherwise they will have to be re-published.

NOTICE TO BE GIVEN TO THE RECTOR, ETC.—Seven days at least before the time required for the publication of the banns the parties must deliver to the incumbent a notice in writing, dated on the day of delivery, giving their true Christian names and surnames, their addresses within the parish, and the time during which they have lived at such address.

DUE PUBLICATION OF THE BANNS.—After the marriage has taken place no question can be raised as to the residence of the parties. But if persons knowingly and wilfully intermarry without due publication of their banns, the marriage will be void.

CONSENT OF PARENTS, WHEN REQUIRED.—Where one of the parties, not being a widow, or widower, is under age, consent to the marriage must be obtained from the father, or, if he be dead, from the guardian appointed under his will, or if there be no such guardian, from the mother.

Where either of the parties is under

age after the banns have been published, their publication will be void if at their publication either of the parents or the guardian of such person objected thereto. •

SOLEMNIZATION OF THE MARRIAGE.

—The marriage can only be solemnized in the church, or one of the churches, in which the banns were published. The ceremony must be performed between 8 a.m. and 3 p.m., and in the presence of two or more credible witnesses, besides the clergyman. The marriage must be registered immediately after it is solemnized, and the register must be signed by the clergyman, the parties married, and the witnesses.

II. By an Ecclesiastical Licence—which may be either an ordinary licence or a special licence.

(1) **AN ORDINARY LICENCE** is an authority granted by a bishop by which a marriage is permitted to be solemnized without the publication of banns. In order to obtain it, one of the parties must personally swear before the surrogate or other person having authority to grant it, that he believes there is no impediment to the marriage; that one of the parties has for fifteen days immediately preceding resided in the parish in which it is to be solemnized; and, where either of the parties (not being a widow or widower) is under twenty-one, that the consent of the parents or guardians has been obtained, or that there are no parents or guardians.

The marriage can only be solemnized in a church belonging to the parish in which one of the parties has so resided for fifteen days; and is subject to the same rules and requirements as apply to a marriage after publication of banns.

If the marriage be not solemnized within three months from the grant of the licence, a fresh licence will have to be obtained.

Such licences may be obtained upon personal application either at the Faculty Office, 23, Knight-rider Street, Doctors' Commons, London, E.C., or at the Vicar-General's Office, 3, Creed Lane, Ludgate Hill, E.C. (between 10-4, or Saturdays, 10-2); or in the country, at the registry office of any bishop, or from some clergyman

who has been appointed for the purpose by the bishop as his surrogate or deputy. Inasmuch as personal appearance is necessary, and the affidavit to be sworn has to be prepared from the personal instructions of one of the parties to be married, the last-mentioned method is the more convenient; but it must be remembered that a licence obtained from a bishop's registry or from his surrogate is only available for a marriage in the diocese in which it is issued. A licence issued by the Faculty Office or the Vicar-General's Office is available in any diocese.

The fees payable are: for the licence itself, £1 10s.; stamp duty on the licence and on the affidavit, 10s. and 2s. 6d. respectively.

(2) **A SPECIAL LICENCE** is an authority granted by the Archbishop of Canterbury to marry at any convenient time or place; and is only obtainable in exceptional circumstances. On such licences there is a stamp duty of £5, and the total amount payable in fees and duty is about £30. Application for such licence must be made to the Faculty Office, 23, Knight-rider Street, E.C.

III. By the Certificate or Licence of a Superintendent Registrar of Marriages.

—The certificate of notice and the licence to marry obtainable from a superintendent registrar of marriages are the civil forms which may be adopted instead of a publication of banns in church and the licence granted by a bishop respectively. A certificate of notice takes twenty-one days to obtain; a licence is obtainable on the expiration of one day after notice. Neither is available for more than three months.

Where it is intended to obtain such certificate, or licence, a notice, must be given by one of the parties to the superintendent registrar of the district in which the parties have dwelt for not less than seven days immediately preceding such notice, if it is intended to apply for a certificate, or for not less than fifteen days where a licence is required. If the parties dwell in different districts such notice must be given to the registrar of each district, in cases where the marriage is not to be by licence.

CASES IN WHICH THE MARRIAGE MAY BE SOLEMNIZED OUT OF THE DISTRICT IN WHICH THE PARTIES DWELL.—If the building in which the marriage is to be solemnized, as stated in the notice, is not within the district wherein one of the parties has dwelt for the time required, a certificate cannot be granted unless there be endorsed on the notice a declaration that, to the best of the applicant's knowledge and belief, there is not within the district in which either of the parties dwell any registered building in which marriage is solemnized according to the rites of the sect or creed to which they belong. The nearest district in which such building exists must also be stated.*

If the parties desire to be married at their usual place of worship, but such building is outside the district in which either of them lives, permission may be obtained if the facts be stated at the time the notice is given, and the building is situate not more than 2 miles beyond the limits of the district in which the notice is given.

PUBLICATION OF NOTICE.—The notice is entered in a book kept for the purpose by the superintendent registrar, who is entitled to a fee of 1s. for making such entry; and where the marriage is to be by licence a stamp duty of 2s. 6d. is payable. Where the marriage is not intended to be by licence the notice, or a copy of it, is exhibited at the office of the superintendent registrar for twenty-one days.

GRANT OF CERTIFICATE OR LICENCE.—If at the expiration of twenty-one days from the entry of the notice no lawful impediment be shown, a certificate of notice will be obtainable on request and the payment of a fee of 1s. Where the marriage is to be by licence, a certificate of notice and the licence to marry will be obtainable, if there be no lawful impediment, at the expiration of one whole day after the entry of the notice, upon payment of 1s. for the certificate and 1s. 10s. for the licence. Upon a licence to marry, a stamp duty of 10s. is also payable.

Certificates of Marriage may be obtained, on giving the name and date, either from the incumbent or from the superintendent registrar of marriages

for the district in which the marriage took place, or from Somerset House, on payment of a fee of 2s. 6d. and a stamp duty for 1d., denoted by an adhesive stamp, which must be cancelled by the person giving the certificate.

MARRIED WOMEN

Remedies for Protection and Security of a Married Woman's Property.—Every married woman is entitled to maintain in her own name against any person whomsoever, including her husband, the same civil remedies and also (subject to the proviso below as to her husband) the same remedies by way of criminal proceedings for the protection and security of her separate property, as if it belonged to her as an unmarried woman. No criminal proceedings, however, can be taken by her against her husband while they are living together, in respect to any property claimed by her; nor while they are living apart, in respect to any act done by the husband while living with her with regard to her property, unless such property has been wrongfully taken by him when leaving or deserting her, or about to do so.

In any such proceedings a husband or wife are competent to give evidence against each other, and the wife or husband of any person charged under the above provision may be called as a witness for the prosecution or defence, and without the consent of the person charged.

A married woman is capable of entering into and rendering herself liable to the extent of her separate property on any contract, and of suing or being sued either on a contract or in respect to any wrongful act committed by her, as if she were unmarried. Any damages or costs, if recovered by her, will be her separate property; or if recovered against her, will be payable out of her separate property.

Any contract entered into by a married woman otherwise than as agent will be deemed to be entered into by her with respect to, and to bind, her separate property, whether she was or was not, in fact, possessed of or entitled to any at the time she made the contract. It will, moreover, bind any separate property of which

she may subsequently become possessed or entitled to, and will also be enforceable against all property which she may after her marriage have ceased to be possessed of or entitled to, provided that her separate property which at the time or afterwards she is restrained from anticipating cannot be taken to satisfy her liability.

DEBTS, ETC., BEFORE MARRIAGE.—A woman after her marriage continues to be liable for all debts, contracts, or wrongs committed by her before marriage. Any sum recovered against her will be payable out of her separate estate; and as between her and her husband, unless there be any contract to the contrary, her separate property will be deemed to be primarily liable for such debts or wrongs. A husband cannot maintain an action against his wife for money lent to her, or money paid for her, before their marriage at her request. But he may do so, and charge her separate estate, either for money lent her after their marriage or for money paid by him for her after marriage, upon request by her, whether made before or after marriage.

A married woman carrying on a trade separately from her husband is in respect to her separate property subject to the bankruptcy laws in the same way as if she were unmarried.

General Provisions with Regard to Married Women.—A married woman may be an executrix or trustee.

A married woman having separate property is liable for the maintenance of her husband if he becomes chargeable to the parish. She is also subject to the same liability as her husband for the maintenance of her children and grandchildren, but her husband is in no way relieved from his liability.

A married woman may effect an insurance upon her own life or that of her husband for her separate use.

MASTER AND SERVANT

The term *domestic servants* generally means servants in their master's house—for example a cook, housemaid, butler, ladies' maid or valet.

The term *menial servants*, though often used as another expression for domestic servants, includes many who, although they do not live in their

master's house, are, nevertheless, on the same footing as domestic servants. For example a coachman, groom, or gardener; likewise a huntsman and a man employed to make himself generally useful, have been held to be menial servants.

In the absence of any definite rule, the best test appears to be whether the servant's principal duties are to attend to the *personal* wants or pleasure of the master or his household. If such are his duties he will be a domestic or menial servant.

The term *workman* includes various descriptions of servants (other than domestic or menial), whose real and substantial occupation consists of manual labour, whether they be males or females.

For the purposes, however, of the Workmen's Compensation Act of 1900, the term "workman" has a special meaning, which, be it observed, includes a gardener, although he is a domestic servant. The provisions of the Act in question are dealt with on page 428.

Domestic or Menial Servants.

The Master's Duties.—In the absence of agreement to the contrary, a master is bound to supply his servant with food and lodging, but he is not legally bound to provide him with medical attendance or medicine. If, however, the servant falls ill and the master calls in his own doctor, he cannot deduct the doctor's fees from the servant's wages, except by special agreement.

No deduction can be made from wages for breakages or damage to property, in the absence of special agreement to that effect. Wages in arrear may be recovered in the County Court, and the servant, though under the age of twenty-one, may sue in his, or her, own name. Instead of providing the servant with food the master may, if he prefers, give "board wages" wherewith to procure it. Such wages must be sufficient to enable the servant to procure what is reasonably necessary for his maintenance. If such is the case, the servant cannot object; otherwise he may leave, and will be entitled to the remedies for wrongful dismissal.

It matters not how inconvenient or unreasonable orders may be, they

must be obeyed, provided they are lawful and within the scope of the servant's employment.

If a servant who has been lawfully dismissed refuses to leave the premises, he may be removed by force; but the prudent course will be to call in the police, though they will not actively interfere so long as the servant is on private premises, unless the owner is prepared to give the servant in charge, which always involves trouble, if not risk.

BY DISMISSAL.—1. *With notice.*—By custom, the agreement is determinable by a calendar month's notice, or a month's wages in lieu of notice. "Wages" means ordinary, and not board, wages.

2. *Without notice.*—Even if the reason originally given for the servant's dismissal subsequently proves to have been insufficient, the master may nevertheless justify the dismissal if a good and valid reason, in fact, existed, though he was not at the time aware of it. If the servant is dismissed for good cause, or leaves without notice in the middle of a month, he is not entitled to any wages for the broken period subsequent to the last monthly pay day; but he is, of course, entitled to his wages for any completed month of service, if such have not been paid. Where a servant receives as his wages so much a year in money and a suit of clothes, he is not entitled to keep the clothes if dismissed before the end of the current year. But if he has been wrongfully dismissed, the loss of the clothes will be taken into consideration in assessing the damages due to him.

BY MUTUAL AGREEMENT.—Where the service is thus terminated, the law will not imply any agreement to pay wages in respect to services rendered between the last day on which wages became due and the day on which the engagement was put an end to. It would, however, require very little evidence to show that the wages for the broken period were in fact payable either by implied agreement or by custom.

BY DEATH.—The contract of service is determined at once by the death of the master. Where the servant dies, his representatives, it appears, are entitled, by custom, to wages for the

broken period between the last pay day and the date of death.

Reasons which Justify a Servant in Leaving without Notice.—*Danger to life or violence to the person.* Additional risks, i.e. risks other than those which the servant must be presumed to have undertaken. *Improper food.* *Immoral employment*, that is to say, the master or mistress is leading an immoral life. *Infectious disease in the house.*—Whether the existence of such a disease in the house is a sufficient reason has not been decided, but it has been said in one case that a servant would be justified in disobeying an order not to leave the house if, owing to an infectious disease raging in it, the servant was obliged to go out for the preservation of his, or her, life. The question appears to depend on the amount of risk attaching in each case to the particular services which the servant may be called upon to perform in connexion with the illness, be it infectious or contagious.

PAYMENT OF WAGES IN SUCH CASES.—A servant who is justified in leaving without notice will be entitled to wages for such services as he may have actually rendered, and may also claim damages as in the case of wrongful dismissal.

If the master or servant, as the case may be, commits a breach of the agreement he will be liable to an action for damages, but the actual performance of the contract cannot be specifically enforced. If the service is to commence at a future date, but before that time comes the master expresses his intention of not fulfilling the contract or renders its performance impossible, the servant may sue at once. Where a servant is dismissed without due cause or proper notice, he may either treat the contract of service as at an end and sue independently of it for the value of the services he has actually rendered, or he may, as is usually the case, treat the contract as still existing and claim damages for its nonfulfilment. It must be remembered that although a servant may have been wrongfully dismissed, it is not merely his moral but his legal duty to seek other employment at once. He is not entitled to sit still until the expiration of the

period in respect to which he would, under ordinary circumstances, have received wages, and then attempt to make the master liable to the utmost amount.

I. STATEMENTS WITH REGARD TO THE SERVANT'S CHARACTER.

Privileged communications.—A master is under no legal obligation to give his servant a character, but if he does he must only state that which he honestly believes to be true. Any statement so made, even if it refers to the servant's conduct after he left, is a privileged communication. If after giving his servant a good character, the master discovers circumstances which lead him to believe that the servant was not entitled to it, he will be justified in communicating with the new employer, and any such communications, if made honestly and in good faith, will likewise be privileged.

Where a master has been recommended a servant by other persons, he is justified in communicating with those persons in reference to the servant's conduct.

Communications made by postcard or telegram.—If a communication which would otherwise be privileged is made by telegram or postcard the privilege will be destroyed if the communication be such that it was capable of being understood by those through whose hands it passed, as having reference to the servant.

Where communication, though privileged, is made maliciously.—If a statement is privileged no action for libel or slander can be maintained in respect to it, even if it was untrue, unless it can be shown that it was made maliciously. If the jury should find the master "exceeded his privilege," it would not be sufficient to render him liable unless they also found that such excess indicated malice.

Where damages are recoverable for slander.—Where the statement, though defamatory, is made by word of mouth (slander), and not in writing (libel), no damages can be recovered by the servant unless: (1) he can show that he has suffered some special or particular damage which was directly due to such false statement, or unless (2) the statement reflected on his

capacity as a servant; or (3) imputed to him the commission of a criminal offence; or (4) charged him with suffering from a contagious disease involving some moral disgrace; or (5) in the case of a female, imputed to her unchastity or adultery.

2. RETURN OF CHARACTER OR TESTIMONIALS WHEN THE SERVANT LEAVES.

A general testimonial of good character intended for future use must be restored to the servant when he leaves. If, however, the servant is discharged for misconduct, the master apparently may and should write upon it that the person to whom it relates was afterwards in his service and was dismissed for misbehaviour. But a master who maliciously defaces such testimonial by writing upon it a disparaging statement will be liable to substantial damages.

3. LIABILITY INVOLVED IN GIVING OR USING A FALSE CHARACTER.

If a master gives a character which he knows to be false and thereby induces another person to employ the servant, he will, if the servant misconducts himself, be liable for any injury which the new master may have sustained in consequence. It has also been said that if a servant were engaged with a good character from his last place and it afterwards come to the knowledge of the master that such character was undeserved, it would be dishonest to pass on the good character to a subsequent employer.

WRONGFUL ACT OF SERVANT.—A master is responsible for the wrongful acts or omissions of his servant when acting within the scope of his employment and when not engaged on some purpose of his own. That the servant was acting in his or her master's interests is immaterial, if not at the time, in fact, acting within the scope of his employment. The master will, of course, be liable if he previously authorized the act or subsequently ratified it.

SANITARY REQUIREMENTS—

Householders' obligations with regard to.

A. Within the Administrative County of London.

REGULATIONS AS TO WATER SUPPLY.

—Every house must be provided with

a proper and sufficient supply of water, otherwise it will be dealt with as a nuisance.

Closing of polluted wells or cisterns.—

On the representation of any person to a sanitary authority that within their district the water in any well, tank, cistern, or water-butt is used or likely to be used by man for drinking or domestic purposes, or for manufacturing drink for the use of man, and is or is likely to be so polluted as to be injurious or dangerous to health, the magistrates, may, by summary order, direct that the well, etc., be permanently or temporarily closed.

If the person on whom the order is made fail to comply with it, he will be liable to a fine not exceeding £20.

REGULATIONS AS TO WATER-CLOSETS.

—Every house must be provided with one or more proper and sufficient water-closets according as circumstances require, furnished with suitable water supply and water supply apparatus, and with suitably trapped soil pan and other suitable works and arrangements, so far as may be necessary to ensure the efficient working thereof. Where, however, sewerage or water supply sufficient for a water-closet is not reasonably available, a privy or earth closet may be substituted.

The County Council are empowered to make bye-laws with respect to closets, privies and cesspools; and so are the sanitary authority, with respect to the keeping of water-closets supplied with sufficient water for their effective action.

If, on examination, any closet trap, or pipe, etc., is found to be in accordance with requirements, and in proper order and condition, the sanitary authority are bound to make good what they have done and pay for any damage. If, however, any closet, etc., is found not to have been made or provided in accordance with the law and the bye-laws of the authorities, the offender will be liable to a fine of £10; and if after notice from the sanitary authority to do what is necessary within a specified time he fails to comply with the notice, he will be liable either to a penalty of 20s. for each day during which the offence continues, or to pay the expenses incurred if the sanitary

authority do the work themselves—as they may do if they think fit.

Whether the closet, etc., be merely out of order or be defectively constructed, the offender will have to pay the costs of the examination; which may be recovered summarily.

Any person who feels himself aggrieved by any notice or act of the sanitary authority may appeal to the County Council, whose decision is final.

It is the duty of the sanitary authority at proper periods, to remove house refuse and to cleanse and empty ashpits and earth-closets, etc. (if any), in their district. If they do not do so at the ordinary period the occupier may serve them with a written notice requiring them to remove the refuse, etc., within forty-eight hours; and failure to comply with the notice will, in the absence of reasonable cause, render the authority liable to a penalty of £20. "House refuse" means ashes, cinders, breeze, rubbish, night-soil, and filth, but does not include trade refuse.

Any person who, being directly or indirectly employed by the sanitary authority, demands from the occupier or his servant money for removing any house refuse, is liable to a fine of 20s.

The sanitary authority may, if they think fit, undertake the removal of manure, etc., from any stables or cow-house within their district, the occupiers of which consent in writing to such removal. Notice may be given by the sanitary authority requiring the periodical removal of manure from stables or other premises. Failure to comply with such notice will, without further notice, involve a fine not exceeding 20s. for each day during which such non-compliance continues. The County Council are authorized to make bye-laws with respect to receptacles for dung.

Trade refuse.—The sanitary authority, if required to do so by the owner or occupier, must remove any trade refuse, but the owner or occupier will have to pay a reasonable sum for its removal—which, in case of dispute, is to be settled by the order of the magistrates. "Trade refuse" includes building materials.

B. In Places outside the Administrative County of London.

WATER SUPPLY.—Where it appears to a local authority that a house is without a proper supply of water, and that the same can be furnished at a cost not exceeding the water rate authorized by any local Act in force within the district, or where such does not exist, at a cost not exceeding 2*d.* a week, or such other cost as the Local Government Board may consider to be reasonable, the local authority may by written notice require the owner, within a specified time, to obtain such supply and do the necessary work for that purpose. If the notice be not complied with, the local authority may do what is necessary, and for that purpose may enter into a contract with any water company in the district, and water rates may be levied on the premises by the authority or company furnishing the supply. Any expenses incurred will be recoverable from the owner.

And in rural districts, if the sanitary authority consider that any occupied dwelling-house has not within a reasonable distance an available supply of wholesome water sufficient for the consumption and use for domestic purposes of the inmates of the house, and are of opinion that such supply can be provided at a reasonable cost not exceeding a capital sum the interest on which at 5 per cent. would amount to 2*d.* a week, or at such other cost not exceeding 3*d.* a week, as the Local Government Board may determine to be reasonable, they may require the owner, within a specified time, not exceeding six months, to provide such supply. If at the expiration of the time specified the notice is not complied with, the authority may serve a second notice informing the owner that if the first notice be not complied with within one month thereafter the authorities will provide the supply themselves and charge him with the expenses, and at the end of the month they may proceed to do so, if the notice be not complied with—unless the owner has within twenty-one days of the second notice sent to the authority an objection to the notice on any of the following grounds: (a) that the supply

is not required, (b) that the time limited for providing the supply is insufficient, (c) that it is impracticable to provide it at a reasonable cost, (d) that the authority ought themselves to provide a supply for the district in which the house is situate or render the existing supply wholesome, (e) that the whole or part of the expenses ought to be a charge on the district. Where any of such objections is raised the authority cannot proceed until authorized by a court of summary jurisdiction or by the Local Government Board.

The rural sanitary authority are entitled to enter and inspect the water supply to any dwelling-house where they have reasonable ground for believing that the supply is defective.

DRAINAGE.—Where a house is without a drain sufficient for its effectual drainage the local authority may, by written notice, require the owner or occupier, within a reasonable time, to make a drain in accordance with their requirements and to empty it into a sewer, if there be one within 100 ft. of the house, and if not, into such cesspool as they may direct.

Regulations as to closets and ashpits.—Where it appears to the local authority that a house is without a sufficient water-closet or privy, or an ashpit furnished with proper doors and coverings, they may enforce the provision thereof, by the same means as are applicable in the case of insufficient drainage. And the local authority may, after compliance with certain formalities, make bye-laws with regard to closets, etc., and the keeping of water-closets supplied with sufficient water for flushing.

Removal of Refuse.—Local authorities may, and when required by the Local Government Board must, themselves undertake the removal of house refuse and the cleansing of closets, ashpits and cesspools. If, having undertaken to do so, they fail, without reasonable excuse, to remove any refuse or cleanse any closet, etc., for seven days after notice in writing from the occupier, they will be liable to pay him a fine of 5*s.* for every day during which such default continues.

Where the local authority have undertaken the removal of house refuse, they may, after complying with certain formalities, make bye-laws imposing on the occupier duties in connexion with such removal so as to facilitate the work which the authority have undertaken. Such bye-laws must, however, be reasonable.

TRESPASS

If a person trespass on private property he must first be ordered off, but if he does not go the occupier of the premises, or his representative, may exercise such reasonable force as may be necessary to remove him; if more than necessary force be exercised, the person resorting to it will be guilty of an assault. The trespasser may be prosecuted for assault if he offers any resistance.

A person found in a dwelling-house, warehouse, coach-house, stable, or out-house or an enclosed yard, garden or area, for an unlawful purpose may be prosecuted as a rogue and vagabond.

VACCINATION

Except in the cases mentioned below, the parent of every child born in England or Wales, or where, by reason of the death, illness, absence or inability of the parent, or other cause, any other person has the custody of the child, such person must cause it to be vaccinated within six months from its birth, and in the event of the operation being unsuccessful, must cause it to be vaccinated again. The person responsible may either require the public vaccinator for the district to attend for the purpose, without fee, or may employ a registered medical practitioner. If the child is not vaccinated within four months after its birth, it is the duty of the public vaccinator for the district, after at least twenty-four hours' notice to the parent, to visit the house of the child and offer to vaccinate it. But the fact that the public vaccinator has omitted to do so does not affect the right, which he has, to take proceedings against the parent, etc., if the child be not duly vaccinated.

Certificate of Successful Vaccination.

—Where the operation has been performed by a public vaccinator and found to be successful, it is his duty to send a certificate to that effect to the vaccination officer of the district, and on request, he is bound to give the parent or other person responsible for the child a duplicate of such certificate, free of charge. Where the child has been vaccinated by a medical practitioner he must, as soon as he has ascertained that the result is successful, give to the parent, etc., a certificate in the proper form, duly filled up and signed by him, which must be sent by the parent, etc., to the vaccination officer within seven days after the inspection of the child. No fee is payable for the registration of the certificate; on the other hand, failure to send it involves a penalty not exceeding 20s.

Cases in which the General Rule will be Relaxed.—1. If the public vaccinator or the medical practitioner, as the case may be, is of opinion that the child is not in a fit and proper state to be successfully vaccinated, it is his duty to give a certificate to that effect, which must be transmitted to the vaccination officer for the district in accordance with the above provisions with regard to certificates of successful vaccination.

2. Where a child, after three unsuccessful attempts, is found to be insusceptible of successful vaccination, or has already had small-pox, it is likewise the duty of the public vaccinator or medical practitioner, as the case may be, to certify accordingly. Failure to transmit the certificate will involve a penalty not exceeding 20s.

3. If within four months from the birth of the child the parent or other person responsible for it satisfies two justices, or a stipendiary or Metropolitan police magistrate, in petty sessions, that he conscientiously believes that vaccination would be prejudicial to the health of the child, and within seven days thereafter delivers to the vaccination officer for the district a certificate by such justices or

magistrate of such conscientious objection.

Penalties for Non-Compliance with Requirements.—Every parent or other person responsible for a child who neglects to have it vaccinated, or after vaccination, to have it inspected in order to ascertain the result will, in the absence of reasonable excuse, be liable to a penalty not exceeding 20s. Moreover, where a person is charged with the offence of neglecting to cause a child to be vaccinated, he may, although found not guilty of such offence, be convicted of the offence of not transmitting any certificate in accordance with the requirements, notwithstanding that there be no mention of the latter offence in the summons; provided, of course, that the circumstances justify such conviction. Persons committed to prison for non-compliance with any order or non-payment of fines or costs are, however, treated as first-class misdemeanants.

A parent may be summarily demanded to procure the vaccination of any of his children under 14 years of age if they have not already been successfully vaccinated. The parent will in the absence of reasonable excuse, be liable to a penalty not exceeding 20s. But he cannot be fined a second time for disobedience to the same order; and after such conviction no new order can be made.

Re-Vaccination of Adults at Public Expense.—Where the operation of revaccinating any person is performed on his application by the public vaccinator without charge, he must attend at the same time and place the following week to be inspected, in order that the result of the operation may be ascertained. On request, a certificate of the result will be obtainable. If, however, such person fail to attend for inspection, he will have to pay a fee of 2s. 6d. for such re-vaccination.

WILLS

The making of a will is a matter in respect to which legal advice and assistance should always be obtained

if possible, and the following statement of the general principles is only intended as a guide for those who may be called upon to make the final settlement of their affairs upon an emergency or other circumstances which preclude the possibility of obtaining professional assistance.

A will must be made in writing and should be contained in a single sheet, but if more sheets than one are used, they should be fastened together, and each sheet numbered and initialled by the testator and the witnesses.

Any erasure or writing between the lines should be avoided if possible, but where such exists it must be initialled by the testator and the witnesses.

The will must be signed at the end by the testator, or by some other person in his presence and by his direction; and such signature must be made, or acknowledged, by the testator in the presence of two or more credible witnesses^a present at the same time, who must attest and sign the will in the presence of the testator.

A person to whom, or to whose wife or husband, any gift is made under the will should not be an attesting witness, otherwise the gift to him (or to her) will be void, though the will itself will be good.

Inasmuch as there must be some one to carry out the provisions of the will, an executor, or executrix (female), should be appointed, whose names and address should be given in full. Usually two executors are appointed, in case one should decline, or be unable, to act.

Taking, therefore, the simplest case, namely, where a testator leaves all his property to one person, as, for instance, to his wife, the will should read thus:—

I, A. B. of — hereby revoke all former wills and testamentary dispositions made by me and declare this to be my last will. I give all my property to my dear wife C. D., and appoint her the sole executrix of my will. In witness whereof I have set my hand to this my will the — day of 19—,

Signed by the above,
A. B. as his last
will in the presence
of us, both being
present at the same
time, who in his
presence and in
the presence of
each other have
hereunto sub-
scribed our names
as witnesses.

A. — B. — *

W. — X. —

Address

X. — Y. —

Address

Where property is left to children under twenty-one, trustees should be appointed to hold it for them until they come of age, with power to apply the income thereof in the meantime for their maintenance and education. The same persons may be appointed executors and trustees.

Where it is intended to give a life interest only, the property should likewise be left to trustees in trust to pay such person the income during his, or her, life, and after the decease of such person to transfer it to whomsoever the testator may desire.

If a person to whom a legacy has been given dies in the lifetime of the testator, the legacy will (except in the case mentioned below) belong to the residuary legatee, if such there be, otherwise the property comprised in such legacy, being undisposed of, will be divided according to the Statute of Distributions, that is, among the widow and children, etc., in certain shares. The only case in which a legacy does not thus lapse on the death of the legatee is where it is given to the child or other issue of the testator, who leaves issue living at the testator's death, in which case the legacy goes to the grandchild or grandchildren, etc., unless the will itself indicates a contrary intention.

A will takes effect as if it had been

* If the testator is unable to sign, the attestation should be—"Signed by M. N., by the direction and in the presence of the testator A. B., in the presence of us, both being present, etc."

made immediately before the death of the testator;

If after a will has been signed any alteration is required, it can only be made by means of a codicil, which should be in accordance with the following form: This is a codicil to the will of me A. B. of —, which will bears date the day of Whereas by my said will I have given, etc. Now I revoke the said gift of, etc. and in lieu thereof I give, etc. And in all other respects I confirm my said will. In witness whereof I have to this codicil to my aforesaid will set my hand this day of

(Attestation required as in the case of the will itself.) A.B.

Who are Capable of Making a Will.—

A woman married after January, 1, 1883, can dispose of her property by will in the same way as any other person. A woman married before that date can dispose of property belonging to her for her separate use, but as there may be a difficulty in determining the extent of such property, she should take advice before making a will. A will made by a married woman does not require to be re-executed after the death of her husband. A person under twenty-one years of age cannot make a valid will. Except as above, any person of sound mind and understanding may make a will.

Effect of Marriage on a Will.—A will, whether made by a man or a woman, is revoked by marriage.

WORKMEN'S COMPENSATION ACT, 1900—Liability of Employer towards Workmen employed in Farming, Gardening, Poultry-keeping, etc.

[Any person who may be liable under this Act to pay compensation will be well advised to insure himself against such liability in one or other of the various insurance offices which undertake risks of this nature.]

Application of the Act.—The Act will apply notwithstanding any contract

to the contrary that may be made between an employer and his workman.

Where the injury sustained by the workman is due to the personal negligence or wilful act of the employer or of some person for whose acts the employer is responsible, the workman may either claim compensation in the manner provided by the Act, or he may bring an action for damages against the employer; but in any other case he can only take proceedings under the Act in respect to a personal injury caused by an accident arising out of and in the course of his employment.

Under the Act in question a person who habitually employs one or more workmen in agriculture is, in certain circumstances, liable to pay them compensation, according to the scale hereafter specified.

The term *workman* for the purposes of the Act, includes any person, male or female, who, either under an agreement of service, apprenticeship or otherwise, earns his, or her, living in agricultural employment, whether by way of manual labour or otherwise. And as it is not necessary that the work should consist of manual labour, which means something more than manual work, persons such as a bailiff or a dairy-maid will, so far as the present Act is concerned, be within the term workman.

The expression *agriculture* is not limited to its ordinary meaning, but includes horticulture, forestry, and the use of land for any purpose of husbandry, inclusive of the keeping or breeding of live stock, poultry, or bees, and the growth of fruit and vegetables.

"**HABITUALLY EMPLOYS.**"—There is no general rule as to when a person may be said to "habitually" employ labour, but it has been stated that he does not do so if he only employs workmen each year for a particular season or period of the year. On the other hand, it does not appear to be necessary that the employment should be for every day of the week, if it is, in fact, regular.

The employment need not necessarily be for wages; and therefore, a farmer who habitually employs one of

his sons to work for him may be within the class of employer to whom the Act applies.

Provided the employer does, in fact, habitually employ at least one workman in agriculture, he will be liable to pay compensation, however short a time the particular workman who has been injured may have been in his employment.

LIABILITY OF EMPLOYER TO COMPENSATE WORKMEN OF CONTRACTOR ENGAGED TO HIM.—If an employer to whom the Act applies engages a contractor to do any of his agricultural work he will, provided that no machinery driven by mechanical power is used, be liable to pay compensation to any of the contractor's workmen if injured either through personal negligence or wilful act of the contractor, or under circumstances which, if the contractor had been an employer to whom the Act applies, would have rendered him liable to pay compensation. The person who employed the contractor will, however, be entitled to be indemnified by the contractor, in any case where the contractor would otherwise have been liable in the first instance.

Where the contractor supplies and uses machinery driven by mechanical power for the purpose of threshing, ploughing or other agricultural work, the person who employed him will only be liable to his own workmen, if any, who may be employed in assisting in the work.

LIABILITY OF EMPLOYER FOR INJURIES CAUSED BY A STRANGER.—Where an injury, in respect to which compensation is payable under the Act, had been sustained by a workman under such circumstances that a stranger,—that is to say, some person other than the employer,—is liable to pay damages, the workman may, at his option, either bring an action against that person to recover damages or proceed against his employer for compensation under the Act, but he cannot do both.

A workman engaged in any employment to which this Act applies is entitled to compensation for *personal injury caused by an accident arising out of and in the course of the employment.* Provided that the injury (i.) is such

as to disable him for a period of at least two weeks from earning full wages at the work at which he was employed; and (ii.) was not attributable to his serious and wilful misconduct.

"PERSONAL INJURY CAUSED BY AN ACCIDENT."—The word "accident" is used in its popular and ordinary sense as denoting an unlooked-for mishap or untoward event which was not expected.

Where a workman in consequence of handling wool which had been taken from a sheep infected with anthrax, contracted the disease, it was held that he had been injured by an accident. But it has been held to be otherwise, where the injury to health is the result of a gradual process.

Where the place and circumstances in which a workman is employed involve a greater than ordinary risk of injury by lightning, such an injury may be considered as caused by an accident arising out of his employment.

The right to compensation is not limited to such injuries as may be the natural or ordinary consequences of the accident.

Similarly where a workman receives personal injuries and death ensues, his death may be the result of the injury within the meaning of the Act, even though, in fact, it may not be the natural consequence of it. That this is so will be seen from the following case: A workman was carrying some pipes when one of them slipped and, falling on his foot, inflicted a wound. A fortnight afterwards erysipelas supervened, and he subsequently died of blood poisoning. It was held that, as it could not be shown that there had been any new act which gave a fresh origin to the after consequences, his death, in fact, resulted from the injury.

Scale of Compensation, Conditions upon Which Payable.

I. WHERE TOTAL OR PARTIAL INCAPACITY FOR WORK RESULTS FROM THE INJURY—a weekly payment during the incapacity after the second week, not exceeding 50 per cent. of the workman's average weekly earnings during the previous twelve months, if he has

been so long employed,¹ but if then for any less period during which he has been in the employment of the same employer, such weekly payment not to exceed 4*g*1.

*Weekly payments may be reviewed at the request either of the employer or of the workman, and on such review may be ended, diminished or increased—subject to the maximum: namely, 4*g*1.*

Weekly Payments may be redeemed—On the application of the employer, a weekly payment, which has been continued for not less than six months, may be redeemed by the payment of a lump sum.

Periodical examination by doctor of workman while in receipt of compensation.—Any workman who is receiving weekly payments may be required to submit himself for examination by a doctor; and if he refuses to do so or obstructs such examination, he loses his right to compensation with effect from the date until he has been examined.

II. WHERE DEATH RESULTS FROM THE INJURY

i. *If the workman has no dependants wholly or partly dependent on his earnings at the time of his death.*—Whichever of the following amounts is the larger:—

- (a) A sum of 4*g*1; or
- (b) A sum equal to his earnings in the employment of the same employer during the three years preceding the injury. If, however, the workman has not been in the employment for that length of time, the three years' earnings will be represented by a sum equal to 100 times his average weekly earnings during the time he has been actually employed.

But in no case may the sum payable exceed 4*g*30.

If any weekly payments have been made under this Act to the workman before he died, the amount of such payments must be deducted from the sum otherwise payable on his death.

ii. *If the workman leaves dependants who are only partly dependent upon his earnings at the time of his death.*—Such sum as may be agreed upon, or, in default of agreement, may be determined,

¹ That is, by the same employer.

on arbitration under the Act, to be reasonable and proportionate to the injury to those dependants; but in no case can a sum be awarded which exceeds the amount payable to those wholly dependent.

iii. *If he leaves no dependants.*—The reasonable expenses of his medical attendance and burial, not exceeding £10. Even where there are dependants, these expenses may apparently be taken into consideration in estimating the compensation payable, provided the limit fixed in the respective cases is not exceeded.

"DEPENDANTS."—The expression "*dependants*" means such of the following persons as were wholly or partly dependant upon the earnings of the workman at the time of his death: namely, his wife, parents and children.

"*Parents*" includes grandparents and step-parents, and "*children*" includes grand-children and step-children. A child of his, though not born till after his death, will also be included.

NOTICE OF THE ACCIDENT MUST BE GIVEN.—Proceedings under the Act cannot be maintainable unless notice of the accident has been given as soon as practicable after it happened, and that the workman has voluntarily left the employment in which he was injured. The notice must give the workman's name and address, and state the cause of the injury, not the cause of the accident, and the date at which it was sustained. It may be served by delivery to the employer or at his

residence or place of business, or it may be sent by post as a registered letter.

TIME WITHIN WHICH A CLAIM MUST BE MADE.—The claim for compensation must be made within six calendar months from the occurrence of the accident, or, in the case of death, within a similar period from the time of death.

MEDICAL EXAMINATION OF WORKMAN.—Where a workman has given notice of an accident he must, if so required by the employer, submit himself for examination by a duly qualified medical practitioner provided and paid by the employer, and if he refuses to do so, or in any way causes obstruction to his being examined, his right to compensation, and any proceeding in relation to it, will be suspended until he has been examined.

SETTLEMENT OF DISPUTES.—Any question as to the liability to pay compensation or as to the amount payable, or the time during which it is to be paid, or, in cases where the workman dies, as to who are his "*dependants*," or the amount payable to any of them, if not settled by agreement must be settled by arbitration. For which purpose an arbitrator may be agreed upon by the parties, but in the absence of agreement, the County Court judge of the district in which all the parties concerned reside, or if they reside in different districts, of the district in which the accident occurred, will act as such.

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THE LIBRARY

A LIST OF 100 GOOD BOOKS.

In compiling the following list no attempt has been made to name the hundred best books, for such a list would always be open to question. The following books are all of a high standard of merit, and can be recommended to provide diversity, entertainment, instruction, and to cover most branches of literature:—
Adam Bede. By George Eliot.
Addison's Essays.
Æsop's Fables.

Alice in Wonderland. By Lewis Carroll.
All Sorts and Conditions of Men. By Sir Walter Besant.
Andersen's Fairy Tales.
Arabian Nights, The.
Autocrat of the Breakfast Table, The. By Oliver Wendell Holmes.
Bacon's Essays.
Barchester Towers. By Anthony Trollope.
Bible, The.

- Bible in Spain, The. By George Borrow.
 Bid for Fortune, A. (Dr. Nikola.) By Guy Boothby.
 Boswell's Life of Johnson.
 Browning, Elizabeth. Poems.
 Burns' Poems.
 Byron's Childe Harold.
 Cloister and The Hearth, The. By Charles Reade.
 Compleat Angler, The. By Walton.
 Coral Island. By R. M. Ballantyne.
 Count of Monte Cristo, The. By A. Dumas.
 Cranford. By Mrs. Gaskell.
 Cruise of the *Cachalot*, The. By Frank T. Bullen.
 David Copperfield. By Dickens.
 Deemster, The. By Hall Caine.
 Descent of Man, The. By Darwin.
 Doctor Nikola. By Guy Boothby.
 Don Quixote. By Cervantes.
 Drink. By Emile Zola.
 East Lynne. By Mrs. Henry Wood.
 Emerson's Essays.
 Eric. By Dean Farrar.
 Far from the Madding Crowd. By Thomas Hardy.
 Foxe's Book of Martyrs.
 Goethe's Faust.
 Gibbon's Decline and Fall of the Roman Empire.
 Grimm's Fairy Tales.
 Gulliver's Travels. By Dean Swift.
 Handy Andy. By Samuel Lover.
 Harold. By Lord Lytton.
 Helen's Babies. By J. Habberton.
 History of England. By Macaulay.
 Innocents Abroad, The. By Mark Twain.
 Ivanhoe. By Sir Walter Scott.
 Jane Eyre. By Charlotte Brontë.
 John Inglesant. By J. H. Short-house.
 Josephus, Works of.
 Kidnapped. By R. L. Stevenson.
 Lambs' Tales from Shakespeare.
 Lavengro. By George Borrow.
 Les Misérables. By Victor Hugo.
 Life of Arnold. By Dean Stanley.
 Little Minister, The. By J. M. Barrie.
 Little Women. By L. M. Alcott.
 Livingstone's Travels.
 Locke on the Human Understanding.
 Lorna Doone. By R. D. Blackmore.
 Macaulay's Essays.
 Many Cargoes. By W. W. Jacobs.
 Mary Barton. By Mrs. Gaskell.
 Micah Clarke. By Conan Doyle.
 Midshipman Easy. By Marryat.
 Milman's History of the Jews.
 Milton's Poems.
 Monsieur Lecoq. By Emil Gaboriau.
 Mother, The. By Eden Phillpotts.
 Mrs. Beeton's Household Management.
 Natural History of Selborne. By Gilbert White.
 Opium Eaters, The. By Thomas De Quincey.
 Ordeal of Richard Everel, The. By George Meredith.
 Origin of Species, The. By Darwin.
 Past and Present. By T. Carlyle.
 Pickwick Papers. By Dickens.
 Pilgrim's Progress, The. By John Bunyan.
 Prisoner of Zenda, The. By Anthony Hope.
 Resurrection. By Count Tolstoy.
 Robinson Crusoe. By D. Defoe.
 Scarlet Letter, The. By N. Hawthorne.
 Self Help. By Samuel Smiles.
 Sense and Sensibility. By J. Austen.
 Seven Lamps of Architecture, The. By John Ruskin.
 Shakespeare's Works.
 She. By H. Rider Haggard.
 Soldiers Three. By Rudyard Kipling.
 Story of the Heavens, The. By Sir Robert S. Ball.
 Study in Scarlet, A. (Sherlock Holmes). By Sir A. Conan Doyle.
 Swiss Family Robinson, The.
 Tennyson's Poems.
 Thelma. By Marie Corelli.
 Tom Brown's School Days. By Thomas Hughes.
 Tom Jones. By Harry Fielding.
 Tower of London, The. By Harrison Ainsworth.
 Treasure Island. By Stevenson.
 Twenty Thousand Leagues under the Sea. By Jules Verne.
 Uncle Tom's Cabin. By Mrs. H. Beecher Stowe.
 Under the Red Robe. By Stanley Weyman.
 Vanity Fair. By W. M. Thackeray.
 Vicar of Wakefield, The. By Oliver Goldsmith.
 Westward Ho! By Chas. Kingsley.
 Wordsworth's Poems.

MARKETING

MARKETING

Thrifty housewives with only small means at their disposal should endeavour to do their own marketing. Although it may be both troublesome and inconvenient to do so, the manifold advantages secured should afford ample compensation. The price of many perishable articles of food is largely influenced by the daily supply, and those who go to the store or shop are more likely to have a fall in the market prices brought to their notice. To obtain the full benefit of this, buyers should understand both the monetary and nutritive value of provisions. In purchasing perishable food, or something one dislikes a repetition of, the temptation to buy too liberally because it happens to be unusually cheap must be resisted. Variety is an important factor in the daily fare: and with an ever increasing supply of fresh and preserved vegetables and fruit, and aided by a collection of reliable recipes such as those included in the *Cookery* section of this book, monotony may be easily avoided.

Beef.—The lean part of beef should be firm and elastic to the touch, free from moisture and unpleasant odour, and when recently killed, bright red in colour, but the colour gradually deepens until parts exposed to the air becomes almost mahogany coloured. The fat should be fairly firm and cream coloured. Joints off a fairly fat small animal with short small rib bones will be found economical and of good quality. A certain amount of fat is an indication of excellence. Long or flat joints have a large proportion of bone,

and beef of that class is often of inferior quality, although leanness is not necessarily an indication of disease, but is more often of insufficient or improper feeding.

HIND-QUARTER contains: Leg of beef (for stewing); round (prime boiling piece); aitch-bone (boiling or roasting); rump (finest part for steaks); thick flank (prime boiling piece); thin flank (boiling); sirloin (roasting.)

FORE-QUARTER.—Fore-rib (prime roasting piece); middle-ribs (economical joint for roasting); brisket (for salting and boiling); chuck and leg-of-mutton piece (used for second quality steaks); clod and sticking (used for soups, gravies, stocks, pies, and trimmings for sausages); shin; cheek.

The following is a classification of the qualities of meat, according to the several joints of beef, when cut up in the London manner:—

First-class—includes the sirloin, with the kidney suet, the rump-steak piece, the fore-rib.

Second-class—the buttock, the thick flank, the middle-rib.

Third-class—the aitch-bone, the thin flank, the chuck, the leg-of-mutton piece, the brisket.

Fourth-class—the neck, clod, and sticking-piece.

Fifth-class—the hock, the shin.

Mutton.—The fat of mutton is firmer and whiter than that of beef. The lean is bright red in colour, and should have a fine grain. Certain varieties of large sheep produce the best mutton, but generally speaking joints off a small plump fairly lean animal, will be found most economical. The

loin or neck of a long, thin-backed sheep has a very small proportion of lean meat, and a large amount of bone.

HIND-QUARTER is divided into the leg; the loin—two loins, when cut in one piece, being called the saddle.

The **FORE-QUARTER** is divided into the shoulder; the neck, the upper part being called for distinction, the scrag, which is generally afterwards separated from the lower and better joint: the breast. The haunch of mutton comprises all the leg, and so much of the loin short of the ribs or lap.

Lamb.—In lamb the flesh should be of a faintish white in colour, smooth and firm to the touch; the fat white and light in appearance. It is cut up into rib, breast, shoulder, loin, leg, fore-quarter.

Pork.—In the best pork the meat is fine and close grained, without a superabundance of fat. The fat itself is firm, solid, and of a pinkish white.

In a sucking pig the tongue should be clean, the flesh pinkish in hue, and the skin clear and fresh.

The side is divided with nine ribs to the fore-quarter; and the following is an enumeration of the joints in the two respective quarters:—

HIND-QUARTER.—Hind-loin, leg, belly or spring.

FORE-QUARTER.—Hand, fore-loin.

Ham and Bacon.—It is difficult to give special directions for the selection of ham and bacon. As a general rule, moderate sized hams are best; when very large they are commonly too fat. The ordinary method of testing the sweetness of a ham is to run a sharp knife or skewer into it close to the bone, and if when withdrawn it has an agreeable odour, the ham is good; if the blade has a greasy appearance and an offensive smell, the ham is bad. In small families it is sometimes convenient to purchase half a ham instead of a whole one; when thus divided it is easy to judge of the quality. The lean should be firm and bright, the fat white, and the smell agreeable. As the upper half of a divided ham will of course contain the most fat and the least bone, and the knuckle end less fat and more bone, the purchaser will select the one or the other according to taste.

Large bacon is almost always coarse, and lean bacon is seldom good. When it is intended to be eaten with lean meat it can scarcely be too fat; when boiled as a separate dish, a fair amount of lean is required. As in ham, the fat should be white, the lean bright red and firm, but not hard.

Veal.—Veal must be fresh killed to be good. The lean should be white, smooth, and juicy; the fat, white, firm and abundant. Stale veal is moist and clammy, the joints are flabby, and there is a faint musty smell.

HIND-QUARTER.—Hind knuckle or hock, fillet, loin chump end, loin, best end.

FORE-QUARTER.—Breast, neck, shoulder, fore-knuckle.

Venison.—In venison the fat should be clear, bright, and thick, and the cleft of the haunch smooth and close.

Game and Poultry.—In selecting a *turkey* see that the legs are smooth and black, its spurs short breast full, and neck long. The eyes should be bright and full, and the feet supple. If the eyes are sunk and the feet dry the bird is stale.

In a young *fowl* the spurs are short and the legs smooth. When fresh the vent is close and dark. White-legged fowls are generally preferred—for no special reason, however, except that the flesh is whiter.

A young *goose* has a yellowish bill and pliable feet with few hairs on either. If the bill and feet are reddish, with many hairs, the bird is old, and if the feet are dry it is stale.

Ducks also (wild and tame) should have pliable feet, the breast should be full and hard, and the skin clear.

Pigeons. The vent should be close and hard, and the feet pliable.

In selecting *game* pluck a few feathers from the under part of the leg; if the skin is not discoloured the bird is fresh. M. Soyer says, "The age may be known by placing the thumb into the beak, and holding the bird up with the jaw part; if it breaks it is young; if not, it is old, and requires keeping longer before cooking to be eatable."

A *hare* when fresh killed is stiff and red; when stale, the body is supple and the flesh in many parts black.

If the hare be old the ears will be tough and dry, and will not tear readily. *Rabbits* may be judged in the same manner. In both the claws should be smooth and sharp. In a young hare the cleft in the lip is narrow, and the claws are readily cracked if turned sideways.

Fish.—In every kind of fish the flesh should be thick and firm, the gills red and the eyes bright. If, on pressing the fingers on the flesh, the impression remains, the fish is stale. Freshness is best indicated by the smell. Medium-sized fish are generally preferable to those which are very large or very small.

Vegetables should be procured as fresh as possible. In this respect the inhabitants of the metropolis suffer some disadvantage. Cabbages, cauliflowers, broccoli, spinach, peas, beans, lettuces, cucumbers, etc., sold in London and other big cities have always lost some of their flavour by being packed and brought to market. If in addition they are allowed to get stale by lengthened exposure, they are scarcely worth eating.

Carrots, turnips, and parsnips are not so quickly spoiled, but are best when fresh. Carrots and parsnips are preserved by being "pitted" in sand.

Potatoes, when properly stored, do not lose much of their flavour by keeping. There are a great many varieties sold, but the confusion of names, and the deterioration of the best qualities when grown in unsuitable soils, render it impossible to recommend any particular kind. Medium-sized potatoes are generally the best.

Eggs, Butter, and Milk.—In choosing eggs, apply the tongue to the large end of the egg, and, if it feels warm, it may be relied on as fresh. Another mode of ascertaining the freshness of eggs is to hold them to the light, and if the egg looks clear, it will be tolerably good; if thick, it is stale; and if there is a black spot attached to the shell, it is worthless. No egg should be used for culinary purposes with the slightest taint in it, as it will render perfectly useless those with which it has been mixed. Eggs may, however, be preserved for a

considerable time without any further special precaution than that of keeping them in a cool place. A very effective method of preserving eggs for winter use is to rub a little melted lard over each to close the pores, and then to pack the eggs in bran or sawdust, not allowing them to touch each other. Or they may be packed in a vessel, and covered with a mixture of freshly slaked lime in water mixed to the consistency of cream. Eggs so preserved will keep for months, but the process renders the shells very brittle.

The adulteration of *milk* is usually limited to the addition of water, but as it is more or less injured by being conveyed long distances, it is seldom to be obtained in big towns of equal quality to that procured in the country. Where a supply of really pure and fresh milk is not available, the *condensed milk*, sold in tins, is invaluable, and under most circumstances it is worth while to keep a tin or two in the house to meet any sudden requirements. One tinful mixed with warm water is equivalent to nearly two quarts of ordinary milk. The *condensed milk* is made by evaporating nearly the whole of the water of the milk from which it is prepared, and adding sugar.

Butter is made in every agricultural district. When intended for the market, no more salt is added in its proportion than is necessary to ensure the butter keeping fresh for a certain length of time. In the North of England and in Wales fresh dairy butter is sometimes quite as salt as imported salt butter, or Irish butter, which is nearly always salted.

Danish butter is highly esteemed for its fine flavour, but Australian butter has an equally good flavour, and it also keeps better. For home consumption Danish butter will be found a capital substitute for fresh butter, but for trade purposes, Australian butter is preferred because it contains more of what may be described as "body."

* Butter, with regard to its properties as food, may be regarded nearly in the light of vegetable oils and animal fats; but it becomes rancid sooner than most other fat oils. When fresh, it is very wholesome: but should be quite free from rancid taste.

TIMES WHEN THINGS ARE IN SEASON

January.

Fish.—Bloaters, brill, cod, cray-fish, dory, eels, flounders, haddock, hake, halibut, herrings, lobsters, mussels, oysters, plaice, prawns, scallops, skate, smelts, soles, sprats, turbot, whiting.

Meat.—Beef, house lamb, mutton, pork, veal.

Poultry.—Capons, fowls, geese, pigeons, rabbits, turkeys.

Game.—Hares, partridges, pheasants, snipe, wild fowl, woodcock.

Vegetables.—Artichokes (Jerusalem), beetroot, broccoli, cabbages (green and red), carrots, celery, endive, leeks, lettuces, onions, sprouts (Brussels), parsnips, potatoes, seakale, savoys, spinach, watercress.

Fruit.—Apples, bananas, grapes (foreign), nuts, oranges, pears, dried fruits.

February.

Fish.—Bloaters, brill, cod, crayfish, dory, eels, flounders, hake, halibut, herrings, lobsters, mussels, oysters, plaice, prawns, shrimps, skate, smelts, soles, sprats, turbot, whitebait, whiting.

Meat.—Beef, mutton, house lamb, veal.

Poultry.—Capons, chickens, ducks, fowls, geese, pigeons, rabbits, turkeys.

Game.—Hares, partridges, pheasants, plovers, snipe, woodcock.

Vegetables.—Beetroot, broccoli, Brussels sprouts, cabbages, carrots, celery, cresses, endive, lettuces, parsnips, potatoes, savoys, seakale, spinach, turnips.

Fruit.—Apples, grapes (foreign), nuts, oranges, pears, rhubarb, dried fruits.

March.

Fish.—Bloaters, brill, crabs, crayfish, eels, flounders, hake, halibut, herrings, lobsters, mullet, mussels, oysters, plaice, prawns, salmon, scallops, skate, smelts, soles, sturgeon, turbot, whitebait, whiting.

Meat.—Beef, house lamb, mutton, pork, veal.

Poultry.—Capons, chickens, ducklings, rabbits.

Game.—Snipe, woodcock.

Vegetables.—Asparagus, beetroot, broccoli, cabbages, carrots, celery,

endive, lettuces, onions, parsnips, potatoes, savoys, seakale, spinach, sprouts, watercress.

Fruit.—Apples, grapes (foreign), nuts, oranges, pears, rhubarb, dried fruits.

April.

Fish.—Brill, crabs, dorys, flounders, lobsters, mackerel, mullet (red and grey), mussels, oysters, prawns, salmon, shad, smelts, shrimps, skate, trout, turbot, whitebait, whiting.

Meat.—Beef, lamb, mutton, veal.

Poultry.—Capons, chickens, ducklings, fowls, guinea fowls, pigeons, rabbits.

Vegetables.—Asparagus, broccoli, cabbages, carrots, lettuces, onions (spring), parsnips, potatoes, seakale, sprouts, spinach, watercress.

Fruit.—Apples, nuts, pears, rhubarb.

May.

Fish.—Crabs, crayfish, dory, lobsters, mackerel, mullet (red and grey), plaice, prawns, salmon, shad, smelts, soles, trout, turbot, whitebait, whiting.

Meat.—Beef, lamb, mutton, veal.

Poultry.—Chickens, ducklings, fowls, green geese, guinea fowls, pigeons, rabbits.

Vegetables.—Asparagus, broccoli, cabbage, carrots (new), cauliflower, cucumbers, lettuces, onions (spring), potatoes (new), radishes, spinach.

Fruit.—Apples, gooseberries (green), rhubarb.

June.

Fish.—Crayfish, eels, halibut, herrings, lobsters, mackerel, mullet, plaice, prawns, salmon, sturgeon, soles, trout, turbot, whitebait, whiting.

Meat.—Beef, lamb, mutton, veal, buck venison.

Poultry.—Chickens, ducklings, fowls, green geese, pigeons, rabbits.

Vegetables.—Artichokes, asparagus, broccoli, cabbages, carrots (new), cauliflowers, cucumbers, lettuces, onions, peas, potatoes (new), radishes, spinach, tomatoes.

Fruit.—Apples, apricots, cherries, currants, gooseberries, melons, rhubarb, strawberries.

July.

Fish.—Crabs, crayfish, dory, floun-

ders, hake, halibut, herrings, lobsters, mackerel, mullet (red and grey), prawns, salmon, soles, sturgeon, trout, turbot, whitebait, whiting.

Meat.—Beef, lamb, mutton, veal, buck venison.

Poultry.—Chickens, ducklings, fowls, green geese, guinea fowl, pigeons, rabbits.

Vegetables.—Artichokes, asparagus, beans (broad and French), broccoli, cauliflowers, carrots (new), cabbages, cucumbers, lettuces, onions, peas, potatoes, tomatoes, vegetable marrows.

Fruit.—Apricots, cherries, currants, gooseberries, melons, strawberries.

August.

Fish.—Brill, crayfish, cod, crabs, dory, eels, flounders, hake, halibut, oysters, mullet, prawns, salmon, soles, sturgeon, trout, turbot, whitebait, whiting.

Meat.—Beef, lamb, mutton, veal, buck venison.

Poultry.—Chickens, ducks, fowls, green geese, pigeons, rabbits.

Game.—Grouse, leverets, snipe, woodcock.

Vegetables.—Artichokes, beans (broad and French), cabbages, carrots, cauliflowers, cucumbers, lettuces, onions, peas, potatoes, radishes, spinach, tomatoes, vegetable marrows.

Fruit.—Apricots, currants, gooseberries, greengages, plums, strawberries.

September.

Fish.—Brill, cod, crabs, dory, eels, flounders, hake, halibut, lobsters, mullet, mussels, oysters, plaice, prawns, salmon, soles, turbot, whiting.

Meat.—Beef, mutton, pork, veal, buck venison.

Poultry.—Chickens, ducks, fowls, geese, larks, pigeons, rabbits.

Game.—Blackcock, grouse, hares, partridges, ptarmigan, snipe, woodcock.

Vegetables.—Beans (French), beetroot Brussels sprouts, cabbages, carrots, cauliflowers, cucumbers, lettuces, onions, potatoes, spinach, tomatoes, vegetable marrows.

Fruit.—Apricots, damsons, grapes, greengages, melons, nectarines, peaches, plums, quinces.

October.

Fish.—Brill, cod, crabs, eels, flounders, haddocks, hake, halibut, herrings, lobsters, mullet, mussels, oysters, plaice, prawns, skate, smelts, soles, turbot, whiting.

Meat.—Beef, mutton, pork, veal, doe venison.

Poultry.—Ducks, fowls, geese, larks, pigeons, rabbits, turkeys.

Game.—Black game, grouse, hares, partridges, pheasants, plovers, ptarmigan, snipe, wild duck, woodcock.

Vegetables.—Beetroots, broccoli, Brussels sprouts, cabbages, carrots, celery, lettuces, onions, parsnips, potatoes, savoys, spinach, tomatoes, vegetable marrows.

Fruit.—Apples, bullaces, damsons, grapes, medlars, melons, nectarines, peaches, pears, pines, plums, quinces.

November.

Fish.—Brill, cod, crabs, eels, flounders, haddocks, hake, halibut, herrings, lobsters, mussels, oysters, soles, sprats, smelts, turbot, whiting.

Meat.—Beef, mutton, pork, doe venison.

Poultry.—Ducks, fowls, geese, larks, pigeons, rabbits, turkeys.

Game.—Black game, grouse, hares, partridges, pheasants, plovers, ptarmigan, snipe, wild duck, woodcock.

Vegetables.—Artichokes (Jerusalem), beetroots, broccoli, Brussels sprouts, cabbages, carrots, celery, onions, parsnips, potatoes, savoys, spinach, tomatoes.

Fruit.—Apples, grapes (foreign), medlars, melons, oranges, pears.

December.

Fish.—Brill, bloaters, cod, eels, haddocks, hake, halibut, herrings, lobsters, oysters, plaice, prawns, skate, smelts, soles, sprats, turbot, whiting.

Meat.—Beef, mutton, pork, doe venison.

Poultry.—Ducks, fowls, geese, larks, pigeons, rabbits, turkeys.

Game.—Black game, hares, partridges, pheasants, plovers, snipe, wild duck, woodcock.

Vegetables.—Beetroots, Brussels sprouts, cabbages, carrots, celery, endive, onions, parsnips, potatoes, savoys, spinach, tomatoes.

Fruit.—Apples, grapes (foreign), medlars, oranges, pears, dried fruits.

MUSIC

THE PIANO

The modern pianoforte has a compass of seven octaves, or occasionally, in full concert grand models, seven and a half. If we look at the interior of a piano, we shall see that the strings are stretched across the composite frame of metal and wood, and that there are several bars and strengtheners to resist the enormous tension of the taut strings. This composite framework also includes the wooden sound-board. The system of levers which connect the hammers which strike the wires, with the keys, is called the *action*, and differs slightly in various types of pianofortes, but includes the following parts:—the key; the lever which raises the hammer; the hammer; the string; the damper; the button which catches the lever after it has struck the hammer; the "check"; the damper pedal-lifter; and the spring. The damper consists of a piece of leather resting on the top of the string, and connected to the back part of the key by a vertical wire; and its duty is to limit the duration of the note, causing it to cease to sound the instant the pressure of the finger is removed from the key. The "check" is fixed in such a position as to prevent the hammer rebounding on the string. The action of the right-hand pedal is to raise the dampers, and so prolong or sustain the sound of the notes. Its use in music is shown by the word *ped*, and an asterisk under a chord or note is the sign for its cessation. The left-hand or damper-pedal diminishes the sound, and its employment in music is denoted by the words *una corda*. The bass-strings are all very thick, and coated with a fine coil of copper wire; the thickness, strength, tension of the strings diminishing from the lower to the upper notes.

The piano should be kept in a room having a fairly even temperature, and should be placed as far from the fireplace as possible, in such a position that it will not be subjected to great heat from the fire, nor be in a direct draught as between a large window and a door. The placing of ornaments, photograph-frames, flower vases, or pots of growing plants on the top of a piano should not be permitted; and all such objects should be removed when the instrument is in use. Damp will cause discoloration of keys, and what is far worse, affect the working parts of the *action*, and rust the wires, causing deterioration of tone, and the breaking of the strings. Unless in use for several hours daily, a good piano should not require tuning more than four times a year, but if subjected to a great deal of work, more frequent tunings will probably be required. It is a great mistake to let a piano be untuned for a length of time, or to allow any one to play upon an instrument that is out of tune; for the amount of "keying up" in the first instance, necessary to bring the whole compass into a true pitch, will unsettle the tonality of the instrument and necessitate repeated attention to keep it up to pitch, while nothing can be more harrowing to the feelings of those obliged to listen, or more destructive to the appreciation of true pitch and tone by the performer, than playing on an out of tune instrument. Only a properly qualified pianoforte tuner should be allowed to tune the instrument, as an inexperienced person can easily do an incalculable amount of damage, and will certainly not leave the instrument "in tune." When the piano is not in use, the top board or cover should be kept closed, but the cover to the keyboard is better left

open, so that the keys are exposed to the light and air, which will help to keep them white. The keys may from time to time be cleaned with a damp washleather, and very carefully and thoroughly dried with a soft cloth. The front of the piano may also occasionally be unlatched and removed, and the interior carefully dusted with a soft dusting brush. Should either of the pedals develop a squeak, the mechanism of the pedal shaft should be examined, and when the position of the squeak has been found, a very slight rubbing of blacklead or prepared French chalk applied; but this must be done with caution, or more harm than good will result. Should a string be broken, the piano should not be played upon until it has been removed. It is most advisable to call in an experienced tuner to replace the broken strings, although new strings can be purchased from most music shops. The replacing of a string may, in inexperienced hands, be fraught with some amount of danger, not only to the instrument, but also to the person attempting it, for should the string snap while being brought up to pitch, and strings may give if not carefully adjusted, and curl outwards, it may inflict serious injury. The removal of a broken string is not, however, so serious a matter; the upper and under panels in the front of the piano must be taken out, and the hammer-frame, carrying the hammers, carefully unlatched and removed, then the two halves of the broken wire can be unfastened from the top peg and bottom pin, and the hammer-frame and fronts replaced.

The performer should be seated immediately in front of the centre of the keyboard, upon a seat sufficiently high to bring the elbows as they rest against the sides of the body, slightly higher than the wrists when the fingers rest in position upon the keys. The hands must be held in position over the keyboard in such a way that the fingers are arched over the keys, but not curved inwards, the wrists being slightly above the level of the keyboard. In the correct position the back of the hand when the finger tips are resting lightly on the keys, should be sufficiently

level to firmly balance a penny. Indeed one of the best exercises for developing the finger muscles, is to balance a penny upon the back of the hand while each finger in turn is raised and lowered upon the key, and to practise scales of three octaves, keeping a penny balanced on the back of each hand. Chords must be struck by the raising and lowering of the hands from the wrist, keeping the arm from elbow to wrist at rest. The beginner should not at first practise for more than twenty minutes to half an hour at a time, but as the muscles of the hands and wrists become more supple the period may be lengthened, though it is always inadvisable for children up to the age of sixteen to practise for more than an hour at a time. Music for the pianoforte is written in two staves, and with the treble and bass clefs. The treble or G clef fixes G above middle C, and the names of the notes in the spaces of a stave bearing the treble or G clef are, F, A, C, E, while the names of the notes on the lines are E, G, B, D, F. The bass clef fixes F below middle C, and the names of the notes in the spaces of a stave bearing the bass clef are A, C, E, G, and the lines, G, B, D, F, A. The greater part of the time given to practice should be devoted to scales and rhythmic melodic exercises. Thus a student who has made sufficient progress to practise for an hour at a time, should allocate the first half-hour to scales and technical exercises, and the second half-hour to the study of a movement from a sonata and some lighter modern composition, giving at least a quarter of an hour to the former.

THE VIOLIN

The violin consists of a wooden body or sound chest, formed of two slightly arched surfaces, called the back and belly, having a curve or hollow on each side in the middle forming a waist, united by the sides or ribs; and projecting beyond this body, a neck or finger-board terminating in a scroll or head which carries the pegs. The four strings are fastened at one end to the belly by a tail piece usually made of ebony, and at the other to the tuning

pegs in the scroll by means of which they are tightened or loosened as may be required. The strings as they pass from the tail-piece to the scroll, are raised above the belly of the violin by a bridge, which is supported in the interior by a sound-post on the right and the base-bar on the left. Immediately on each side of the bridge there are two sound holes opposite each other in the belly of the instrument resembling in form the long *s* in old print. The four strings are of gut, the lowest being covered with fine silver wire; the strings are tuned in fifths, the highest or first string being tuned to the second E above middle C, the E on the fourth space of the treble clef, and the other three are tuned to the A, D, and G, in succession below it. The bow used in playing the violin is made of horsehair, upon which, from time to time, a little fine rosin is rubbed to make it "bite" or grip the strings and cause them to vibrate. The powdered rosin should not be allowed to collect on the body of the violin, as it has a deadening effect which spoils the tone, therefore a silk handkerchief should always be kept in the violin case for the purpose of dusting the instrument after it has been played upon. The violin should, when not in use, always be kept in a properly constructed case, with a soft silk handkerchief to protect it from any trace of damp. In some compositions written for the violin, passages will be found marked with the words *con sordino*, which means that a little instrument called the *mute*, or *sordino*, is to be placed on the bridge during the performance of the passage or movement. The effect of the mute is to greatly reduce or soften the tone. Other passages will be found marked *pizzicato*, i.e. with the finger, and mean that the strings are to be plucked by the first finger of the right hand, the thumb resting against the side of the finger-board to give the necessary support. Each shift of the left hand up the finger-board, is called a position; thus when the hand is nearest the scroll so that the first finger will when pressed on each string produce the next note above the open string, i.e. will sound A on the G

string, E. on the D, B on the A, and F on the E string, it is said to be the First Position; when the first finger is used to stop the notes B, F, C, G, the hand is in the Second Position, and when the first finger stops C, G, D, A, across the strings, the hand is in the Third Position, and so on for each shift. Pure and true intonation is everything in violin playing, and depends upon the ear being trained to appreciate the least falseness of pitch, to the evenness of pressure of the fingers on the left hand as they press or stop the strings, and to the perfect sweep and pressure of the bow upon the strings, governed by the right hand. No instrument can be compared with a good violin, in the hands of a gifted and sympathetic performer, in power of expression and wide range of tone. At the same time it is the most exacting of all instruments, demanding constant practice on the part of the performer. The study of the violin should be commenced as young as possible, so that ears and fingers may be got into perfect training while they are still sensitive and supple.

THE VIOLONCELLO

The violoncello is very similar in construction to the violin, and is held between the knees of the performer. It is tuned in fifths, the first string sounding A on the fifth line of the bass clef, and the other three strings sounding respectively the D, G, and C below. Music for the violoncello is usually written in the bass clef, but the tenor and treble clefs are used for the upper registers. The quality of tone in a good instrument, is singularly sweet and sympathetic.

THE MANDOLINE

The back of the body of the mandoline is composed of a number of narrow pieces of different kinds of wood, bent into shape and glued together. On the open upper side of the body is fixed the sounding-board, with the fretted finger-board neck and head similar to that of the guitar, but of course much shorter. The four double wire strings are tuned in fifths like the violin, the upper double string sounding the E in the top space of the treble clef, and the other three double

strings the A, D, G in succession below. The instrument is played with a small oval-shaped plectrum made of tortoiseshell or some similar material, and is held lightly between the middle finger and thumb of the right hand, the hand being gently arched over the sounding-board, and the strings struck with the loose movement of the hand. The fingers of the left hand are placed firmly between the frets on the finger-board, and the various positions are obtained by sliding the hand up or down in the same way as with the violin. Unless the mandoline is supported by a broad ribbon passed over the left shoulder and under the right arm, a sitting position is the most comfortable when playing.

THE BANJO

The banjo is naturally associated with the troupes of so-called negro minstrels, who were responsible for its introduction into England. Like most novelties, it attracted a great deal of notice when it first arrived, and became for a time a fashionable craze. On account of its somewhat strident nasal twang, due to the parchment drum sounding-board, it does not compare favourably with the guitar for vocal accompaniments. It is still fairly popular as a solo instrument. The most generally used model now is the five string banjo, although formerly banjos with six and even seven strings had their devotees; but the five-stringed has become the recognized standard type. Like the guitar, the strings of the banjo sound an octave lower than written, the notes appearing on the treble stave as follows:—1st string D on fourth line of treble stave, 2nd string B, 3rd string G, 4th string middle C below the stave, 5th string G above the stave (the octave of the 3rd string). The first, second, third, and fifth strings are of gut, and the fourth of silk overspun with silvered wire. The *Barré*, positions, and fingering are very similar to that of the guitar. The performer should be seated with the rim of the banjo resting on the upper part of the right leg. The body should lean slightly forward, so that the upper part of the hoop rests lightly against the right side of

the chest for support. The right forearm resting on the edge of the rim just above the tailpiece, so that the hand is directly over the bridge. In playing, the strings are made to vibrate chiefly with the thumb, first, and second finger of the right hand, the third finger coming into play when chords of four notes are required. To facilitate rapid execution a string is sometimes pulled with a finger of the left hand, and is termed the "snap." Thimble playing is executed by means of a specially manufactured thimble, placed over the finger-nail of the first finger of the right hand, and is chiefly used for solos accompanied by the piano.

SOL-FA SYSTEM

The credit of the main principles of the Tonic Sol-fa system of music is due to Miss Glover, a teacher at Norwich, and these principles were later developed by the Rev. John Curwen. The system places special emphasis upon the fact that there is in reality but one scale in music, which is raised or lowered according to the pitch of the key. The seven notes of the diatonic scale are represented by Miss Glover's modification of the Solfeggio syllables which she converted into *Doh, Ray, Me, Fah, Soh, Lah, Te*; *Doh* always standing for the keynote in whatever key the music is written. In the written music of the Sol-fa system, only the initial letters of the Solfeggio syllables are used. Higher octaves of a given note are distinguished by a figure placed against and slightly above the initial letter, thus:—*d*¹, *r*¹, or *d*², *r*², and so forth; and in the same way the lower octave is distinguished by the figures placed below the initials—*d*₁, *r*₁, *m*₁, or *d*₂, *r*₂, *m*₂, etc. The name of the key is prefixed to a tune as its signature, thus: "Key A," "Key D," etc. In all major keys *doh* is the keynote, and in all minors *lah* is the keynote. Rhythm is indicated by a long perpendicular line which precedes the stronger and louder accent. The colon: signifies the softer accent, and a short perpendicular line an accent of medium force. A note following immediately an accent mark, is considered to occupy

the time from that accent to the next. The continuance of a previous note through another pulse or beat is indicated by a horizontal line. A dot divides a pulse or beat into equal subdivisions, a dot placed after a horizontal mark of continuance, indicates that the previous note is to be continued through half that beat. A comma is used to indicate that the note preceding it fills a quarter of the time from one accent to the next; a dot and comma together three-quarters, while an inverted comma, denotes that the note preceding it fills one-third of the time from one accent to the next. An unfilled space represents a rest or pause. Although the system has gained many adherents, there are many objections to it owing to its eliminating that direct indication of both absolute and relative pitch to the eye which exists in the ordinary notation, its limited applicability to instrumental music, and the fact that its acquirement does not, like that of the ordinary notation, introduce the student to the great world of musical literature.

SINGING

Singing is at once the most natural, the most pleasing, and the most healthful form of musical recreation. It should be encouraged in children and all young people, of both sexes; as vocal exercises, if properly practised, all tend to develop the chest and abdominal muscles, and the lungs, and to keep the blood well oxygenated and therefore in a healthy condition. If the following simple exercises and rules are observed, the singing voice may be developed and its quality and strength greatly increased. Proper breathing exercises are of the greatest importance, and should be practised most methodically, because they will not only help in the development of the voice, but will greatly improve the general health. The best time to practise deep breathing is on rising in the morning, and just before retiring at night, before any tight fitting garments have been donned. It is very important that the windows are open, so that the room is filled with fresh pure air, for to practise breathing

exercises in a close room is to carry the vitiated poisonous atmosphere directly to the lungs. Standing perfectly erect, the body only clothed in loose garments so as to give perfect freedom to the chest, neck, and abdomen, draw the shoulders well back, but not in a strained position, and place the hands lightly on the hips with the elbows held close to the body. The head should be very slightly thrown back. Expel the breath through the open mouth. Then close the mouth and slowly draw in the air through the nostrils, taking as deep an inspiration as possible, so the lungs become fully inflated. Hold the breath for a moment, and then once more expel it steadily and slowly through the open mouth. Again shut the mouth and take a slow deep inspiration through the nostrils, hold for a moment, and expel, and continue the exercise for five to ten minutes. Start with a couple of minutes morning and night, gradually prolonging the time as the muscles become supple through practice and use. Find with the help of the piano the natural compass of your voice, i.e. those notes which you can produce without the least effort and without sensation of contraction of the throat muscles. Then take the six middle notes for practice, and use the syllables La, Fa, for singing them. Stand by the piano in an easy, erect position, with the shoulders well back and the head up, strike the note you are going to sound, take a deep inspiration through the nose, and then opening the mouth fairly wide sing the note to the syllable La, allowing the breath to escape slowly, noiselessly, and steadily, so that the volume of sound is clear, sustained and steady in pitch. Practise each of the six notes from the middle register of the voice in this way, and when they can always be produced clearly and purely, and not before, gradually increase their number, taking alternately one higher and one lower, until the whole natural compass has been developed. When you have developed an octave in this manner, practise singing each note to its proper Solfeggio syllable. In this way the voice will be naturally and truly developed.

NAMES

A LIST OF CHRISTIAN NAMES AND THEIR MEANINGS

NAMES OF MEN.

Aaron, inspired, lofty.
 Abel, breath, fleeting, vanity.
 Abijah, one to whom God is a father.
 Abner, father of light.
 Abraham, father of a multitude. Dim.
 Abe.
 Absalom, father of peace.
 Adam, red earth, or man of earth.
 Adelph, Adolphus, noble hero, or happiness and help. Dim. Dolph.
 Adrian, one who helps.
 Alan, harmony, or Hound.
 Alaric, king, or ruler of men.
 Albert, all bright, or illustrious. Dim.
 Bertie.
 Alexander, defender of men. Dim.
 Aleck, Sandy, Sawnie.
 Alfred, wise counsellor. Dim. Alf.
 Algernon, having a beard.
 Allan, same as Alan, which see.
 Alonzo, same as Alphonso, which see.
 Alphonso, ready or willing to help or do.
 Ambrose, immortal, of divine origin.
 Amos, a burden, or brave and strong.
 Andrew, manly, strong and courageous. Dim. Andy.
 Anselm, safeguard of God.
 Anthony, Antony, invaluable, deserving praise. Dim. Tony.
 Archibald, bold and brave or holy prince. Dim. Archie.
 Arnold, one who maintains honour, or strong and swift as an eagle.
 Arthur, noble, of high birth.
 Asa, physician, healer.
 Athanasius, immortal, deathless.
 Athelstan, stone of honour, noble stone.
 Aubrey, powerful over spirits.
 Augustin, Augustine, Austin, Augustus, imperial, of exalted rank, worshipful. Dim. Gus, Gussy.

Baldwin, brave and bold friend.
 Bardolph, a famous helper.
 Barnabas, Barnaby, son of consolation, son of a prophet.
 Barnard, Bernard, bold and strong as a bear.
 Bartholomew, a son fit for wars. Dim.
 Bat, Barty.
 Basil, royal, kingly.
 Beaumont, a beautiful hill.
 Bede, prayer, supplication.
 Benedict, blessed.
 Benjamin, son of the right hand.
 Bernard, bold as a bear.
 Bertram, bright, illustrious.
 Boniface, a benefactor or well-doer.
 Brian, strong, having a loud voice.
 Caesar, having much hair, or cut away, some say blue-eyed.
 Caleb, a dog.
 Calvin, bald, having no hair.
 Cecil, dim of sight.
 Charles, of a noble spirit, manly and strong. Dim. Charlie.
 Christian, belonging to, or a follower of Christ. Dim. Christie.
 Christopher, bearing Christ.
 Clarence, illustrious.
 Claude, Claudius, lame.
 Clement, kind-hearted, merciful, mild in temper.
 Conrad, able in counsel, resolute.
 Constant, Constantine, firm, faithful, resolute.
 Cuthbert, known to fame.
 Cyprian, a man of Cyprus.
 Cyril, commanding, lordly.
 Cyrus, the sun.
 Dan, a judge or lawgiver.
 Daniel, a divine judge, or judge appointed by God.
 David, well-beloved. Dim. Dave, Davy.
 Demetrius, belonging to Demeter or Ceres.

- Denis, Dennis, a form of Dionysius, which see.
 Dionysius, belonging to Dionysus, or Bacchus, the god of wine.
 Donald, proud imperious chief.
 Douglas, dark and grey.
 Duncan, a chief of dark complexion.
 Dunstan, most high.
 Ebenezer, stone of help.
 Edgar, one who protects the possessions of others, or happy in honour.
 Edmund, defender of property, or happy in peace. Dim. Eddy.
 Edward, defender of property, or happy as a keeper. Dim. Ned, Teddy.
 Edwin, one who wins possessions.
 Egbert, ever bright, or famous as a swordsman.
 Eldred, terrible in war.
 Eleazar, helped by God.
 Eli, a foster son.
 Elias, same as Elijah.
 Elihu, God the Lord.
 Elijah, Jehovah the Lord.
 Elisha, the salvation of God.
 Ellis, a form of Elisha, which see.
 Emmanuel, or Manuel, God with us.
 Eneas, worthy of praise.
 Enoch, dedicated to God.
 Enos, man.
 Ephraim, extremely fruitful.
 Erasmus, lovable, worthy to be loved.
 Erastus, amiable, worthy to be loved.
 Eric, kingly, brave, powerful.
 Ernest, earnest, serious.
 Esau, hairy.
 Eugene, well born.
 Eusebius, godly, devout.
 Eustace, firmly fixed, strong.
 Evan, British form of John, which see.
 Everard, brave and strong.
 Ezekiel, the strength of God. Dim. Zeke.
 Ezra, assistance, aid, help.
 Felix, happy, prosperous.
 Ferdinand, fierce, brave, valiant.
 Festus, happy, glad, rejoicing.
 Francis, free. Dim. Frank.
 Frederic, or Frederick, abounding in peace, peaceful ruler. Dim. Fred.
 Gabriel, messenger, or strength of God.
 Garret, a form of Gerald or Gerard, which see.
 Geoffrey, same as Godfrey, which see.
 George, a husbandman, one who tills the soil. Dim. Georgie.
 Gerald, Gerard, strong and able in the use of weapons.
 Gideon, one who breaks.
 Gilbert, bright as gold, famous. Dim. Gil.
 Giles, a kid or young goat.
 Godfrey, at peace with God.
 Godwin, good or fortunate in war.
 Gregory, watchful, wary.
 Griffith, having great faith.
 Gustavus, a warrior, one brave and valiant in fight.
 Guy, a leader or general.
 Hannibal, a gracious lord.
 Harold, a champion leader of men.
 Henry, a rich or powerful chief. Dim. Hal, Harry.
 Hector, a brave defender.
 Herbert, glory of soldiers.
 Hercules, the glory of Hera or Juno.
 Herman, a valiant soldier.
 Hezekiah, one who cleaves to the Lord.
 Hilary, cheerful, merry.
 Hiram, noble and illustrious.
 Horace, Horatio, worthy to be beheld.
 Hosea, salvation.
 Howel, sound or whole.
 Hubert, bright in soul or spirit, some say bright-coloured. Dim. Bertie.
 Hugh, Hugo, high, lofty.
 Humphrey, guardian of house and home, or domestic peace.
 Ichabod, the glory has gone.
 Ignatius, bold, ardent, fiery.
 Ingram, raven, or according to some pure as an angel.
 Inigo, a form of Ignatius, which see.
 Ira, watchful, wary.
 Isaac, laughter. Dim. Ike.
 Isaiah, salvation of the lord.
 Ivan, Russian form of John, which see.
 Jabez, one who causes pain.
 Jacob, a supplanter. Dim. Jake.
 James, a form of Jacob, which see. Dim. Jem or Jim, Jemmy or Jimmy.
 Japheth, increase, extension.
 Jason, one who heals.
 Jasper, meaning doubtful, but perhaps shining or radiant.
 Jedediah, beloved of God.
 Jeffrey, a form of Geoffrey, which see.
 Jeremiah, exalted of the Lord.
 Jeremy, a form of Jeremiah, which see.
 Jerome, sacred or holy name.
 Jesse, wealth, riches.
 Joab, fatherhood, or Jehovah is his father.
 Job, afflicted, sorrowful.
 Joel, the Lord is God.

- John, the gracious gift of God, or the grace of the Lord. Dim. Johnny, Jack.
- Jonah, Jonas, a dove.
- Jonathan, the gift of the Lord.
- Joscelin, just and fair.
- Joseph, addition, or He shall add. Dim. Joe.
- Joshua, saviour, or one who saves.
- Josiah, Josias, given by God, or the fire of the Lord.
- Julian, belonging to, or descended from Julius.
- Julius, having soft hair.
- Justin, Justus, just, honourable.
- Kenelm, a defender of his family.
- Kenneth, a leader of men.
- Lancelot, a little servant or messenger, or a little warrior.
- Lambert, endowed with land, illustrious as an owner of land.
- Laurence, crowned with laurels. Dim. Larry, Lawrie.
- Lawrence, a form of Laurence, which see.
- Lazarus, bereft of help, or God will help.
- Leander, a lion-like man.
- Lemuel, formed by God.
- Leonard, lion-hearted, or brave as a lion.
- Leonidas, resembling a lion.
- Leopold, a defender of the people, or bold in the people's cause.
- Lewis, courageous soldier, or brave and bold in battle.
- Lionel, young lion.
- Llewellyn, Llewellyn, lightning.
- Lorenzo, a form of Laurence, which see.
- Louis, a form of Lewis, which see.
- Lubin, a friend well-beloved.
- Lucian, belonging to, or descended from Lucius.
- Lucius, born at dawn of day, or shining as the dawn.
- Ludovic, a form of Lewis, which see.
- Luke, a wood or grove of trees.
- Luther, famous warrior.
- Lothair, a form of Luther, which see.
- Lycurgus, one who drives away wolves.
- Madoc, kind, benevolent.
- Malachi, the messenger of God.
- Manasseh, forgetful, careless.
- Marcus, a form of Marcus, which see.
- Mars, a hammer, or sprung from Mars.
- Marmaduke, noble and powerful. •
- Martin, martial, warlike, sprung from Mars.
- Mark, a form of Marcus, which see.
- Mathew, the gift of God. Dim. Mat or Matty.
- Matthias, a form of Mathew, which see.
- Maurice, dark in colour, sprung from a Moor.
- Maximilian, the greatest or most illustrious Æmilian (Latin). Dim. Max.
- Meredith, protector of the sea, or the roaring of the waves.
- Micah, who is like God?
- Michael, who is like God? Dim. Mickey, Mike.
- Miles, a soldier.
- Morgan, a scholar, or one whose business is on the waters.
- Moses, drawn from the waters.
- Napoleon, lion of the grove.
- Nathan, a gift.
- Nathaniel, the gift of God.
- Neal, Neil, dark, swarthy.
- Nehemiah, the consolation or comfort of the Lord.
- Nicholas, victory of the people, or victorious over the people.
- Noah, rest, consolation.
- Noel, relating to Christmas, or born at Christmas.
- Nonus, the ninth in order of birth.
- Norman, a man of the north country, or one born in Normandy.
- Obadiah, the servant of the Lord.
- Obed, one who serves God.
- Octavius, the eighth in order of birth.
- Oliver, an olive tree or olive branch.
- Orestes, a dweller on the mountains.
- Orlando, fame of the land.
- Oscar, one who rushes to the fight.
- Osmond, Osmund, peace at home, protection of God.
- Oswald, ruler of a house, or the power of God.
- Owen, of noble descent, or young warrior.
- Ozias, the strength of God.
- Patrick, one of noble birth. Dim. Paddy, Pat.
- Paul, little, of small stature.
- Paulinus, little Paul, being a diminutive of the name Paul.
- Percival, a place in France.
- Peregine, a stranger or foreigner.
- Peter, a rock or stone.
- Philander, a lover of men.

- Philemon, friendly, affectionate.
 Philip, a lover of horses. Dim. Phil.
 Phineas, bold of countenance.
 Pius, holy, devout.
 Polycarp, much fruit, fruitful.
 Ptolemy, renowned in war.
 Quartus, fourth in order of birth.
 Quentin, or Quintin, a form of Quintus, which see.
 Quintus, fifth in order of birth.
 Ralph, a form of Rodolph, which see.
 Randal, tame wolf, or helpful.
 Ranulph, a form of Randal, which see.
 Raphael, the healing of the Lord.
 Raymond, Raymund, peace or protection.
 Reginald, powerful king or ruler. Dim. Reggy.
 Reuben, a son.
 Reynold, a form of Reginald, which see.
 Richard, powerful, good or kind-hearted. Dim. Dick.
 Robert, famous or powerful in counsel. Dim. Bob, Rob, Robin.
 Robin, a diminutive of Robert, which see.
 Roderic, or Roderick, illustrious, possessing fame and renown. Dim. Rory.
 Rodolph, hero of renown.
 Roger, powerful with the spear, or able in counsel. Dim. Hodge.
 Roland, famous through the land.
 Rowland, a form of Roland, which see.
 Rudolph, a form of Rodolph, which see.
 Rufus, red or reddish.
 Rupert, a form of Robert, which see.
 Samson, or Sampson, a little son or a son that brings joy.
 Samuel, sought of God, or heard of God. Dim. Sam, Sammy.
 Saul, desired or requested.
 Sebastian, one who should be revered, venerable.
 Septimus, seventh in order of birth.
 Seth, appointed.
 Sextus, sixth in order of birth.
 Shadrach, having joy on the way.
 Sidney, a conqueror.
 Sigismund, one who conquers and protects.
 Silas, a form or contraction of Silvanus, which see.
 Silvanus, or Sylvanus, a dweller in a wood.
 Silvester or Sylvester, born in the woods or in the country.
 Simeon, hearing and accepting.
 Simon, a form of Simeon, which see.
 Solomon, a man of peace, or peaceable. Dim. Sol.
 Stanley, staunch.
 Stephen, a crown or garland. Dim. Steve, Steefie.
 Swithin, powerful friend.
 Tertius, third in order of birth.
 Thaddeus, wise, prudent.
 Theobald, bold in the cause of the people.
 Theodore, the gift of God, or given by God.
 Theodoric, having power among the people.
 Theodosius, given by God.
 Theophilus, a lover of God.
 Thomas, a twin. Dim. Tom, Tommy.
 Timothy, one who fears God. Dim. Tim.
 Titus, meaning not certain.
 Tobias, goodness of God, or distinguished by God. Dim. Toby.
 Tristram, or Tristram, sorrowful in countenance, grave, sad.
 Tybalt, a form of Theobald, which see.
 Ulysees, one who hates his fellow-men.
 Urban, born in the town, and therefore courteous, polite.
 Uriah, light of God.
 Valentine, powerful, strong. Dim. Val.
 Victor, a conqueror.
 Vincent, conquering, overcoming.
 Vivian, living or lively.
 Walter, a leader of soldiers. Dim. Wal, Wat, Watty.
 William, helmet of defence, protector. Dim. Will, Willy and Bill, Billy.
 Wilfred, strong and peaceful.
 Zaccheus, pure, innocent.
 Zachariah, Zachary, mindful of the Lord.
 Zechariah, a form of Zachariah, which see.
 Zedekiah, the justice of the lord.
 Zenas, given by Zeus or Jupiter.
 Zephaniah, hidden by God.

NAMES OF WOMEN

- Abigail, father's delight. Dim. Abby.
 Ada, a form of Edith, which see.
 Adela, a princess, woman of noble birth or royal birth.
 Adelaide, a form of Adela, which see.
 Adelina, diminutive form of Adeline, which see.

Adeline, one of royal birth, a princess.
 Dim. Addy, Elsie.
 Agatha, good, kind-hearted.
 Agnes, pure, chaste.
 Aileen, an Irish form of Helen, which see.
 Alberta, all bright, or illustrious.
 Alethea, reuth, truthful.
 Alexandra, Alexandrina, defender of men.
 Alice, a princess, noble. Dim. Allie, Ally, Elsie.
 Alicia, a form of Alice, which see.
 Alma, gracious.
 Almira, of high birth.
 Althea, one who heals.
 Amabel, lovable, beloved.
 Amanda, worthy to be loved.
 Amelia, busy, active in business.
 Dim. Milly.
 Amy, loved, beloved.
 Angelica, like an angel.
 Angelina, like an angel.
 Ann, or Anne, grace or gracious.
 Anna, a form of Ann, which see.
 Annette, diminutive of Ann, which see.
 Antoinette, priceless, invaluable. Dim. Netty or Nettie.
 Antonia or Antonina, invaluable, inestimable.
 Arabella, a beautiful altar. Dim. Bel, Bella, Belle.
 Augusta, imperial or of exalted rank.
 Aurelia, golden or like gold.
 Aurora, redness of the morning, fresh and bright.
 Barbara, foreign or strange. Dim. Bab.
 Beata, blessed, or making happy.
 Beatrice, or Beatrix, making happy. Dim. Beattie.
 Belinda, meaning uncertain, perhaps coined by Pope after Latin form.
 Bella, beautiful.
 Benedicta, blessed.
 Bertha, bright, beautiful.
 Betsy, or Betsey. Dim. of Elizabeth, which see.
 Blanca, a form of Blanch, which see.
 Blanch, or Bianche, white, fair.
 Bona, good.
 Bridget, strength, or brightness. Dim. Biddy.
 Camilla, swift of foot, or according to some, one who attends at a sacrifice.
 Carlotta, a form of Charlotte, which see.

Caroline, of a noble spirit, strong.
 Dim. Caddie, Carrie.
 Cassandra, a reformer of men, or one who causes love.
 Catharine or Catherine, pure. Dim. Cassie, Kate, Kitty.
 Cecilia, dim of sight. Dim. Cis, Sis, Sisley.
 Cecily, Sesily, a form of Cecilia, which see.
 Celestine, heavenly.
 Celia, meaning uncertain, name probably coined after Latin form.
 Charity, love, goodness of heart.
 Charlotte, of a noble spirit.
 Chloe, a green herb, flourishing.
 Christiana, belonging to or a follower of Christ. Dim. Chrissie.
 Christine, or Christina, forms of Christiana, which see.
 Cicely, a form of Cecilia, which see.
 Clara, bright, illustrious, renowned. Dim. Clare.
 Clare, Clarice, Clarissa, all forms or variations of Clara, which see.
 Claudia, lame.
 Clementina, mild, merciful.
 Constance, firm, constant.
 Constantia, a form of Constance, which see.
 Cora, girl, maiden.
 Cordelia, having a warm heart.
 Corinna, a form of Cora, which see.
 Cynthia, belonging to Mount Cynthus.
 Daisy, brightness.
 Deborah, a bee. Dim. Deb, Debby.
 Decima, ten in order of birth.
 Delia, of, or belonging to Delos, a Greek island sacred to Apollo.
 Diana, daughter of Jupiter.^f Dim. Die, Di.
 Dinah, judged. Dim. Di.
 Dora, a form of Dorothea, which see.
 Dorcas, a wild gazelle.
 Dorinda, a form of Dorothea, which see.
 Dorothea, or Dorothy, the gift of God. Dim. Doll, Dolly.
 Edith, happiness, or rich and precious gift. Dim. Edie.
 Edna, joy, pleasure.
 Eleanor, Elinor, forms of Helen, which see.
 Elisabeth or Elizabeth, one who is devoted to God, or who worships God. Dim. Bess, Betty, Betsy.
 Lizzy, Libby, Liza.
 Eliza, contracted form of Elizabeth, which see.

- Ella, shortened form of Eleanor, which see.
- Ellen, a form of Helen, which see.
- Elsie, God of the Oath.
- Elvira, white.
- Emeline, or Emmeline, energetic, industrious. Same as Amelia.
- Emily, a form of Amelia or Emeline, which see.
- Emma, a form of Emeline, which see.
- Ernesta, Ernestine, earnest, serious.
- Ethel, bright star, good fortune.
- Estelle, a form of Esther, which see.
- Ethel, noble by birth.
- Eudora, good gift.
- Eugenia, of noble birth, well born.
- Eulalia, fair of speech.*
- Eunice, happy or fortunate victory.
- Euphemia, having good report. Dim. Effie.
- Eva, Eve, life, or giving life.
- Evangeline, bearer of good tidings.
- Evelina, Eveline, forms of Eva or Eve, which see.
- Faith, implicit trust. (English, through Latin.)
- Fanny, a dim. of Frances, which see.
- Faustina, lucky, propitious.
- Felicia, happiness.
- Fidelia, one who is faithful.
- Flora, flowers, being the name of the heathen goddess of flowers.
- Florence, blooming as a flower.
- Frances, free. Dim. Fanny, Frank.
- Francesca, Francisca, Franzisja, all forms of Frances, which see.
- Frederica, abounding in peace, peaceful ruler- Dim. Freddie.
- Frederika, a form of Frederica.
- Georgiana, one who tills the ground. Dim. Georgie.
- Georgette, diminutive of Georgiana.
- Georgina, form of Georgiana, which see. Dim. Gina.
- Geraldine, strong and able in the use of weapons.
- Gertrude, maiden of the spear, according to some, all truth.
- Gladys, hope.
- Grace, grace, favour.
- Griselda, firm as stone. Dim. Grisel.
- Hadassah, Hebrew form of Esther, which see.
- Hagar, flight.
- Hannad, a form of Anne or Annä, which see.
- Harriet or Harriot, a rich or powerful little chief. Dim. Hatty.
- Helen, Helena, Light or alluring. Dim. Nell, Nelly.
- Henrietta, a rich or powerful little chief. Dim. Ella, Hetty.
- Hephzibah, I delight in her.
- Hester, a. form of Esther, which see.
- Hilda, battle-maid.
- Honora, Honoria, honourable.
- Honour, a form of Honora.
- Hope, expectation, hope.
- Hortensia, one who is fond of a garden.
- Hulda, a weasel.
- Ida, like a goddess.
- Inez, Spanish form of Agnes, which see.
- Irene, peace, peaceful.
- Isabel, Isabella, a variation of Elizabeth, which see.
- Ivy, constancy.
- Janet, the gracious gift of God.
- Janet, a form of Jane, which see.
- Janet, a supplanter.
- Janet, Jeanne, Jeannette, forms of Jane, which see. These forms as well as Janet, are diminutives, and mean "little Jane."
- Jemima, a dove.
- Jerissa, wedded, held in possession.
- Jessica, Scotch form of Janet, which see.
- Joan, Joanna, Johanna, forms of Jean or Jane, which see.
- Joseph, addition. Dim. Josie.
- Josephine, a form of Joseph. Dim. Phenie.
- Joyce, pleasant, sportive.
- Judith, worthy of praise or praising. Dim. Judy.
- Julia, having soft hair.
- Juliana, belonging to, or sprung from Julius.
- Juliet, diminutive form of Julia, which see.
- Justina, just, honourable.
- Katharine, Katherine, forms of Catherine, which see.
- Laura, a laurel.
- Laurinda, a variation of Laura, which see.
- Lavinia, a woman of Latium.
- Leonora, a form of Eleanor, which see.
- Letitia, joy, happiness. Dim. Letty.
- Lettice, a variation of Letitia, which see.
- Lilian, lily, a lily.
- Lois, something to be desired.
- Louisa, brave and bold in battle. Dim. Louie.

- Louise, a form of Louisa, which see.
 Lucia, a form of Lucy, which see.
 Lucretia, gain, or light.
 Lucy, bright as the dawn, or born at daybreak.
 Lydia, a woman born in Lydia in Asia Minor, and a descendant of Lud.
 Mabel, a variation of Amabel, which see.
 Madeline, a form of Magdalen or Magdalene, which see.
 Magdalen or Magdalene, a woman of Magdala in Syria, or according to some magnificence.
 Marcella, one sprung from Mars.
 Marcia, a hammer, or sprung from Mars.
 Margaret, a pearl. Dim. Madge, Maggie, Margery, Meg, Meggy, Peg, Peggy.
 Maria, a form of Mary, which see.
 Marianne, a name compounded of Mary and Ann or Anne, which see.
 Marie, a form of Mary used in France and Germany.
 Martha, sorrow, bitterness or according to some, the ruler of the house. Dim. Mat, Matty, Pat, Patty.
 Mary, butter, or star of the sea. Dim. Moll, Molly, Poll, Polly.
 Matilda, heroine, a woman who deserves honour. Dim. Mat, Matty, Pat, Patty, as for Martha.
 Maud, a variation of Matilda, which see.
 May, either from Maia, the mother of the heathen god Mercury, after whom the month of May is called, or a diminutive of Mary, which see.
 Melissa, a honey-bee.
 Mercy, compassion.
 Mildred, one who speaks mildly.
 Millicent, sweet singer. Dim. Milly.
 Minnie, remembrance.
 Miranda, admirable.
 Miriam, exalted, or bitter.
 Mabel, sorrow.
 Myra, one who grieves or weeps.
 Nancy, a form of Ann or Anne, which see.
 Nest, or Neta, chaste.
 Nora, Norah, contractions of Honora and Leonora, which see.
 Naomi, bitterness.
 Octavia, the eighth in order of birth. Dim. Tavy.
 Olive, an olive tree.
 Olivia, a form of olive, which see.
 Ophelia, a serpent.
 Olympia, heavenly, or belonging to Olympus, this Greek mountain being supposed to be a spot on which the heathen deities assembled.
 Parnell, little Peter, a feminine form for Peter, being an old English name through or from Greek.
 Patience, endurance with calm unruffled temper or without murmuring, bearing quietly.
 Paula, little.
 Paulina, diminutive form of Paula, which see.
 Pauline, a form of Paulina, which see.
 Penelope, one who works at the loom, a weaver.
 Persia, a woman of Persia.
 Petronella, a form of Parnell, which see.
 Phebe, pure, radiant, or of or from Phoebus or Apollo, the heathen god of the day.
 Philippa, fond of horses.
 Phillis, a green leaf or bough. Dim. Phil or Phillie.
 Phoebe, a form of Phebe, which see.
 Phyllis, a form of Phillis, which see.
 Polly, sometimes given as a Christian name, but properly a diminutive or variation of Mary, which see.
 Priscilla, somewhat old. Dim. Prissy.
 Prudence, practically wise, showing judgment and forethought.
 Psyche, the soul.
 Rachel, a ewe or ewe lamb.
 Rebecca, fat, plump, or, according to some of rare beauty. Dim. Becky.
 Rebekah, a form of Rebecca, which see.
 Rhoda, a rose.
 Rosa, a rose.
 Rosabel, Rosabella, a beautiful rose.
 Rosalia, Rosalie, or Rosaline, a little rose.
 Rosamund, protected or famous protection, or, according to some, rose of peace.
 Roxana, daybreak.
 Ruth, beauty or trembling.
 Sabina, a Sabine woman, or one sprung from the Sabines.
 Sabrina, the river Severn.
 Salome, peaceful or perfection.
 Sara, Sarah, a mother of nations, that is, a princess. Dim. Sal, Sally.
 Sapphira, like a sapphire stone.
 Selma, the moon or parsley.
 Serena, clear, calm, unclouded.

Sibyl, A prophetess, or the wisdom of God.

Sibylla, a form of Sibyl, which see.

Sophia, wisdom. Dim. Sophy.

Sophronia, of a sound mind.

Stella, a star.

Stephana, a coronal or garland. Dim. Steffie.

Susan, a lily. Dim. Sue, Suke, Suky, Suzy.

Susanna, Susannah, forms of Susan, which see.

Tabitha, a gazelle, or roe, equivalent to Dorcas, which see.

Temperance, moderation.

Theodora, given by God, or the gift of God. Dim. Theo. Dora.

Theodosia, the gift of God. Dim. Theo.

Theresa, one who carries ears of corn, a gleaner.

Therese, a form of Theresa, which see.

Thomasine, a twin. Dim. Tamzine.

Tryphena, delicate or luxurious. Dim. Phenie.

Tryphosa, delicious, or dainty.

Ulrica, rich, abounding in wealth.

Urania, heavenly.

Ursula, a little she bear.

Valeria, strong and powerful.

Victoria, Victory, all conquering. Dim. Vic.

Vida, beloved.

Viola, Violet, a violet.

Virginia, pure, chaste. Dim. Virgie.

Vivian, Vivien, lively, spirited.

Wilhelmina, helmet of defence, protector. Dim. Mina.

Wilmot, an old-fashioned English name, a form of Wilhelmina, which see.

Winifred, a lover of peace, or peace-maker. Dim. Winnie, Freddie.

Zenobia, the life of Jupiter, or Zeus, or having life from Jupiter.

Zoe, life, having life, or lively.

THE NATURALIST

WORK AT HOME

Nobody who is really fond of Nature, and is therefore constantly obtaining various kinds of specimens, can ever complain of lack of interesting work to do at home, for most of the specimens which one collects require treatment of one kind or another to preserve or display to the full their natural beauty (and interest). But we must know how to set about our work, or our efforts may do more harm than good, and instead of adding interest to our hobby, dishearten us by repeated failure.

PLANTS

For instance, there is a right and a wrong way of collecting plants that we wish to dry and preserve. They should never be collected in wet weather, or when dew is on the leaves. So far as is possible, always make a point of gathering those plants you want to preserve on a bright day. On arriving home, sort out the best and most interesting specimens, and place them with just the ends of their stalks in water in a cool room, where they should remain until the next day to

recover from any flabbiness or drooping. In the meantime procure a good supply of white blotting-paper, a stout drawing-board, a little larger all round than the specimen you are going to treat, and a good sized flat-iron. Take the plant you wish to preserve and place it between double thicknesses of the blotting-paper, taking care to spread out and arrange the stems, leaves, etc. Then take the hot flat-iron and pass it rapidly and evenly over the blotting-paper, using only a moderate pressure, so as not to crush the stems too flat, and continue this ironing process until all the moisture is dissipated. Experience will quickly teach you how hot the flat-iron should be made, some plants requiring greater heat than others. But provided attention is given to the proper heating of the flat-iron, this will be found to be one of the simplest and best methods of preserving botanical specimens, for by this hot iron process it is possible to preserve many colours which would otherwise fade.

SKELTON LEAVES.

if properly prepared, make very

beautiful and interesting objects. As they are very fragile when finished, they should be mounted under a glass case with a dead black background. Leaves of rather a strong, woody texture, with well-developed veins, such as holly, lime, poplar, and laurel, give the best results. Of formulae for successfully preparing skeleton leaves there are a very great number, but they are all practically variations on the three following methods. The first is the old-established process of steeping the leaves in boiling soft, or rain, water, in a shallow pan, and allowing them to be exposed to the atmosphere for one to four months, or longer if necessary, filling up the pan from time to time with more rain-water to replace what is lost by evaporation. When the soft tissues have become thoroughly sodden and pulpy, the leaves may be very gently transferred from the pan to a board, or old photographic china dish, placed under running water, and all the pulpy epidermis removed by carefully brushing with a small water-colour sable-brush. When only the woody fibre skeletons remain, they may be bleached with a weak solution of chloride of lime, or by prolonged exposure to the sunlight. The great objection to this process is the length of time it takes, otherwise it is always capable of yielding very perfect results.

A quicker method by which equally good results are obtainable, with care, is to prepare a solution composed of 6 ozs. of washing soda, 3 ozs. of previously slacked quicklime, and two quarts of boiling water. Let this solution boil for ten to fifteen minutes, allow any sediment to settle, and after filtering bring the clear solution once more to the boil. Then add the leaves, and keep the solution on the boil for thirty or forty minutes, or longer if necessary. From time to time, lift out a leaf, place it in a vessel of tepid water, and test with the fingers or a soft brush to see if the epidermis will come away easily; if it does not, then the leaves must be boiled for a longer period. Skeleton leaves prepared in this way may be bleached in a chloride of lime solution (1 drachm of chloride of lime to 20 ozs. of water), to which

sufficient acetic acid has been added to liberate the chloride. The leaves will take about ten minutes to bleach, and should then be removed from the bleaching bath, well washed, and floated out on pieces of paper. They should be gently lifted from the paper before they are quite dry, and pressed in the usual way. Some workers use permanganate of potash instead of washing-soda-lime solution. The leaves are first boiled in plain water for a few minutes, and then placed in a strong solution of potash permanganate, which must be kept warm, in which they are allowed to remain until the epidermis readily comes away. A strong solution of bisulphite of soda will help to remove the permanganate stain.

FUNGI

While most of the large, hard, and woody fungi require no special treatment beyond slow and careful drying, the large numbers of the softer and succulent species must be bottled in a preservative fluid, if their form and colour are to be kept. For this purpose formalin will be found most useful, and made up with distilled water into solutions of varying strength—from 1 per cent. to 10 per cent. or more—according to the character of the fungi to be preserved. The specimens should be placed in glass jars filled with preservative fluid, and tightly corked down to prevent evaporation.

PRINTS OF LEAVES

By the aid of ordinary photographic printing out paper (generally known and sold as P.O.P.) it is possible to obtain fine impressions of the veins of leaves. Obtain an ordinary half-plate printing frame, a sheet of clean glass to fit it, and a packet of P.O.P. paper. Lay the leaf, free from moisture, on the glass plate in the printing frame, place a piece of printing paper in contact with it, and back up with a couple of sheets of thick writing paper. Print in a strong light, but not in direct sunlight, until all the detail shows strongly; then tone and fix the print according to the instructions given on the packet of paper. Another, and

at one time very popular, way of obtaining printed impressions of leaves on paper, was to smear the leaf over with a coloured printer's ink, composed of cold drawn linseed oil with the desired colour rubbed up in it, using a pair of washleather rubbers for applying the ink to the surface of the leaf. A thin layer of the ink is spread over the surface of the washleather dabbers by taking up a little of the ink on one, and then rubbing them both together. Gently warm the leaf to make it pliable, place it on one dabber and go over it with the other; then place the leaf on the sheet of paper that is to receive the impression, cover with another sheet of paper, and apply a gentle, even pressure. If these details are carefully carried out, very fine impressions of the veining of the leaf will be produced.

BIRDS' EGGS

If birds' eggs must be collected, their contents should be removed at once, if they are to be successfully preserved. It is however far wiser to leave the eggs in the nest, and to photograph both nest and eggs in the natural surroundings, taking care in doing so not to disturb the nest, or the branches on which it rests, seriously, or the parent birds may desert it, and as much harm be done as if the nest had been robbed. A good series of photographs showing the eggs untouched in the nest, is of far greater value scientifically and artistically, than a mere bald collection of eggs. However, if some eggs have been collected, their contents must be removed by first drilling a neat hole with an egg-drill, and then drawing out the fluid with an egg-blower, both of which instruments can be purchased for a modest sum from any taxidermist. The eggs must then be washed out with water, to which a little essence of cloves has been added, or a fairly strong solution of formalin.

FISHES

Fishes are the most difficult creatures to skin and mount in a really satisfactory manner, requiring long experience in the art of skinning and mounting; therefore the amateur will be wiser to hand over his specimens to the

trained taxidermist to prepare. Many small fish, the beautiful marine worms, the smaller jelly-fish, and the sea anemonies, may be preserved successfully by being placed in glass jars filled with 5 per cent., 10 per cent., or 12 per cent. solution of formalin, and tightly corked down. The advantage of formalin over alcohol is that it does not tend to extract or alter the colour of the specimen, or cause it to contract as when placed in spirit.

MOTHS AND BUTTERFLIES

after being killed either with chloroform or cyanide of potassium, must have a fine entomological pin passed through the centre of the thorax, and then be properly set. For this purpose a setting-board, which consists of two pieces of smooth flat board (with a narrow space between them for the body of the insect), placed upon another board with a piece of cork or "turf" running down between the top boards to hold the pin. The setting-board must be sufficiently wide to take the fully outstretched wings of the butterfly or moth. Pin the insect to be set with its body in the groove of the setting-board, and with a blunt-pointed needle, set in a wooden handle, very carefully arrange the wings, keeping them in the desired position by means of narrow strips of paper secured by ordinary pins. Be very careful not to puncture or injure the wings in any way, or the specimen will be rendered comparatively valueless. The specimen must remain on the setting-board until thoroughly dry, which will take from a week to a fortnight, according to the climatic conditions, and the size of the specimen. To relax, dry, or unset specimens, fill a box or soup plate with damp sand, partially cover the sand with a sheet of cabinet cork or a piece of board, and on this place the insects; cover over with an ordinary glass bell-jar, and set aside for a day or two, by which time the wings will have become sufficiently limp to permit of the insect being easily set. Be careful not to let the specimens remain too long in the relaxing chamber, or they will be quite spoilt by mould or by becoming permanently discoloured.

THE NEEDLEWOMAN

A Sewing Machine is the greatest boon to the home needlewoman, that is, providing she thoroughly understands how to make a proper use of it. Some people may imagine that a machine is so simple that no experience is required to work it. This is quite a wrong impression as, in order to do machine work really well, one has to learn, and practise for some time.

Every make of machine has a mechanism of its own, with a particular adjustment of its various parts and accessories. A small book containing the necessary information concerning these important details is usually given to the buyer of the machine, or can be obtained at the manufacturer's.

Machine stitching is often used on dresses to ornament revers, collars, tucks, strapping on skirts, etc., and to neatly and smartly stitch awkward little curves and odd corners is no easy task. Such a variety of work can now be accomplished with the aid of the accessories to a machine, e.g. gathering, tucking, quilting, binding, ruffling, etc., that its value to dressmakers and seamstresses is immense. But at the same time, however perfect a machine may be, it can never entirely take the place of skilful fingers. It is absolutely necessary to be a clever needlewoman, and to possess a good practical knowledge of the construction and putting together of the various parts of a garment if one wishes to make a really successful use of the sewing machine. Those who are clumsy at handwork will lack the deftness of touch and firm hold necessary for the manipulation, and keeping in place, of material being stitched by a machine.

The following simple rules apply to any make of machine. Before beginning to sew with the treadle, first practise working the treadle without thread in needle, until you can produce

a regular motion with ease. It is better to work the treadle with one foot only, and, as far as possible, by action of the ankle.

Some probable causes of *broken cotton* are :—

Machine not properly threaded. Obstruction in tension. Cotton held too tight at starting. Use of unsuitable or inferior cotton. Material caught on some part of machinery. Material too hard.

Some probable causes of *dropped stitches* are :—

Needle bent or not exactly in place. Use of unsuitable needle, or cotton. Material too hard. Too much oil on wheel, causing it to turn backwards.

Some probable causes of *machine running hard* are :—

Blunt needle. Machine wants oiling. Machine not standing square on table.

It is most necessary to keep a machine properly cleaned and oiled to ensure ease and pleasantness of working. If only occasionally used the machine should be oiled and wiped twice a week; if in constant use it should be oiled every day. Be careful to wipe perfectly clean before using. It is advisable to use proper machine oil, as this does not clog the machine, prevents rust, and cleans the bearings. This oil can be obtained at the sewing machine manufacturer's. If by accident oil should get upon the work, rub the spot with soap and cold water before washing, or iron it out.

After oiling, run machine rapidly for a few minutes, in order to work the oil well into the various parts. Be most careful to wipe the superfluous oil from every part above, and near, the *cloth plate*.

As the machine should run hard from long disuse, or neglect, apply a little benzine instead of oil, and after

working until it runs freely, wipe machine, and use the oil.

The machine should be kept covered when not in use.

Never use a blunt or bent needle.

If the material to be worked upon is hard and difficult for the needle to penetrate, rub the seam with a little curd soap.

Never allow an unskilled mechanic to tamper with machine.

SILK OR COTTON MACHINE SEWING

Cotton or silk should generally be three sizes finer than that used for hand sewing. Any good cotton will work well on a machine, with the exception of very fine numbers of soft finished.

For black or coloured cottons use only *glacé* finished.

To work upon calico, long cloth, etc., use cotton Nos. 60 to 80.

For fine linens use Nos. 80 to 120.

For nainsook and lawn, etc., use Nos. 100 to 150.

For woollens, flannels, etc., use Nos. 40 to 60.

For *heavy* woollen materials use Nos. 20 to 40.

For dressmaking use Nos. 50 to 70, or silk Nos. 24 to 30.

For braiding use cotton No. 70, or silk No. 30.

For hemming silk use silk No. 36.

For embroidery use silk Nos. 8 to 10.

CUTTING OUT

Paper patterns of the desired dress, or article of clothing, are given away with most of the fashion journals, and papers devoted to the cult of the needle, or can be obtained at the publishers of these periodicals for a very small sum. The patterns are usually accompanied by all necessary directions for cutting out and making up material.

THE "WAY OF THE STUFF"

The first point to be mastered before cutting out a garment is the "way of the stuff." All woven materials have a selvedge way and a weft way. The selvedge is generally known as the "right" way, and the weft as the "wrong." There are

several ways of distinguishing the selvedge from the weft, but the simplest is to take the edge of the material in one hand, and with the other, hold the materials at the distance of an inch or so, then gently pull in opposite directions. The selvedge way will remain firm against the pulling, while the weft will give and stretch.

MEASURING MATERIAL

Supposing one is asked to measure a piece of material and the measurement is given as 24 by 12, meaning length and width. The tape measure must always be placed selvedge way first and weft way afterwards—viz. 24 inches selvedge way and 12 weft way. *The selvedge measurement is always given first.*

When measuring out a length of material with an inch tape care should be taken not to stretch the stuff, but rather to very slightly ease it. The best way to measure is to place the material on a flat, hard surface and lay the tape along it.

CUTTING AND TEARING MATERIAL

Some materials can be torn while others must be cut. Flannel, print, and calico should tear evenly, but as tearing generally twists the material it must be pulled diagonally in order to straighten it before being used.

Muslins and cambrics, and such like thin materials, also flannelettes, should be cut, as tearing spoils the edges by straining.

Oxford shirting, and other striped or checked stuffs, should also be cut. To cut lawn, linen, and holland it is advisable to *draw a thread* and cut by that, so as to keep a perfectly even edge. All crossway pieces, yokes, *shaped* bands, etc., must always be cut.

PLANNING MATERIAL.

The first thing to be done is to ascertain the right side of the stuff. Great care is required in planning material with a pattern upon it which must only be used one way. In this case it is best to cut each part of the garment singly, then match the pattern on material and lay the cut out piece

right side downwards in order to cut the fellow piece.

It is always best when placing a pattern on material to arrange all the parts before commencing to cut out, as by that method one can contrive to fit each part in to the best advantage. This is also advisable on the score of economy as, with a little dexterous manœuvring, the small pieces can be fitted in between the larger portions. Economy can also be practised by making several similar garments at the same time, as by this means it is possible to save a certain amount of material. It often happens that a piece of stuff remaining over from one garment can be made use of in the construction of another. Thus, where two garments might be made out of six yards of material, half of this quantity would not make one singly. But, when placing a pattern to the best advantage, one should be careful not to allow one's economical enthusiasm to make one lose sight of the fact that due allowance must always be made for turnings.

When it is desired to cut out a number of garments of the same kind, always make use of the *original* pattern for the shaping of each, as, the scissors always go slightly outside the edge of the pattern, thus, if the second pattern be used to cut the third, the third the fourth, and so on, the outline will increase with each garment and the desired shape will probably be spoiled.

ARRANGING PATTERNS

Most paper patterns are for one side of a garment only, so it is most important that the material be folded correctly, and that the part of the pattern which represents the fold be placed exactly at the folded edge of material. Great care must also be taken to fold the material properly as regards selvedge, or weft, way, so that the pattern lies in the exact position upon the material which the designer intended it should. A great deal depends upon this; in fact, the whole set and shape of the garment may be ruined if these directions are not closely followed.

As a rule, the pattern should be

placed lengthwise upon the *selvedge* way of the material, that is to say, the selvedge must run downwards from neck to feet and from shoulder to wrist in all garments. Of course there are some extreme fashions in dresses which may depart from this rule, but in every case a lining or foundation is always cut out upon this principle.

It is best to use double material for cutting all parts of garments which are in pairs, such as sleeves, legs of drawers, armholes, sides of night-gowns, etc.

Material should be cut on the cross when used for binding or finishing off necks, arm-holes, wrists, or any part in the nature of a curve or slant.

All straight bands, whether for waist, wrist, or knee, are cut selvedge way, to prevent them stretching or splitting. That is to say, the selvedge should run *round* the bands. *High collars* of dresses depart from this rule and should be cut on the cross. Yokes are generally cut out selvedge-way, with a few exceptions, which depend upon the material used and the effect desired. In such cases the *lining* of yoke must be cut selvedge way.

When all portions of a pattern are correctly arranged they should be *very lightly* pinned on to the material to prevent them from slipping out of place. All outside corners should be pinned near the edge.

HOW TO CUT OUT

There is a proper way of using the scissors when cutting out a garment, and correct and rapid cutting can only be attained by handling the blades skilfully. The bulk of the material to be cut out should be kept to the left hand side, and the scissors used along the right hand edges of pattern. The left hand should be firmly laid, *perfectly flat*, upon the pattern, within an inch or so from the cutting edge. The right hand should hold the scissors so that the pointed blade is downwards upon the table. A firm, steady grip is essential for nice, clean cutting. The material should only be raised sufficiently to insert the scissor blade beneath it. It is the greatest mistake to raise the material from the

table while cutting, as in so doing it is liable to slip out of position. Of course, in some cases it may not be possible to keep the material flat beneath the left palm, but this plan should be followed whenever it can be managed.

Do not cut through more than two thicknesses at a time as, in so doing, the lower folds become strained by the blade of the scissors, and therefore lose their accuracy of outline. If the material must be cut fourfold cut through the two upper sections first and the lower folds by this.

The blades of the scissors should be opened *wide* and *closed smartly*, or jagged, uneven edges will be the result. See that the *greater part* of the lower blade rests upon the table. When one cut is taken move the left hand and place it firmly in line with the scissors, ready for the next cut. Don't take *small bites* with scissors, but endeavour to use the entire length of blade; this will ensure a clean, even cut.

TO MAKE PATTERNS

The right proportions of the human figure are perfect, and so beautifully combined that, if the size of one part be known, the exact measure of all the other parts can be ascertained. Thus it may be noticed that the measure of wrist, neck, and waist is often taken, so that either forms a starting-point for the whole. Thus the size of the wrist is half the size of the neck; that of the neck half the waist; half the waist is the length of the waist to the throat. The size of the waist is equal to the inner length of the arm; the length of the arm is equal to the width of the chest; two-thirds of the size of the waist are equal to the length and width of the back; one-third the size of the waist is equal to the width of the shoulders and length of the side, and so on throughout. But calculations based upon perfect proportions are not of much service to the inexperienced, considering that figures in exact proportion form the exception and not the rule. A pattern prepared in accordance with the rules of proportion may look exceedingly nice, but it is not at all likely to fit the ordinary individual. Therefore,

the more simple and direct plan is to take some additional measurements and thus prevent wrong calculations. The good habit of never working without measurements lends an exactness to the eye which will make easy the different alterations required by different figures.

MEASUREMENTS REQUIRED FOR A PATTERN

- 1 Length of skirt in the front.
- 2 Length of skirt at the back.
- 3 Length of front of the body.
- 4 Width of the chest.
- 5 Height of the side.
- 6 Size of the waist.
- 7 1st height of shoulder.
- 8 2nd height of shoulder.
- 9 Size of the neck.
- 10 Length of the back.
- 11 Width of the back.
- 12 Size of the armhole.
- 13 Width of the shoulder.
- 14 Width of shoulders from one side to the other.
- 15 Length of the arm.

The *length* of all parts when ascertained is to be marked in full, but in the case of the *width* only half the measurement is required. The reason for this is that the back and the chest represent two equal halves; it is therefore sufficient to know the size of one half of the back and chest rightly to obtain the other and thus the *whole* width. For this reason never more than half a pattern is made. This plan besides saving the trouble of cutting out both sides also ensures that both sides of the material, when cut from it, are exact.

TO TAKE MEASUREMENTS

Length of skirt, front and back.—One end of yard measure is placed at the lower end of the back at the centre of the waist, and drawn down until the required length of the dress has been obtained. The length of the front of the dress is taken from waist to feet.

Length of front of the body.—The measure is placed at the hollow of the neck, in a straight line to the waist. The exact position of the waist ought to be just above the hips. If a straight line be held across the hips the centre

of the line will be the spot to place the lower measurement for the length of the body.

Width of the chest.—The measure is laid from one side of the chest at the side of the right arm and taken loosely across the fullest part of the chest towards the left arm.

Height of the side.—The measure is placed under the arm and taken to the hip.

Size of the waist.—The measure is placed round the waist and joined in front, allowing about $\frac{1}{2}$ of an inch more than the exact size.

1st height of shoulder.—The measure is placed at the waist and carried over the shoulder by the neck to the end of the back at the centre of the waist.

2nd height of shoulder.—The measure is laid at the waist by the hip, and taken over the shoulder by the hollow of the arm to the lower part of the back, at the side of the waist.

Size of the neck.—The measure is placed lightly round the neck. It should then be folded into six parts for the whole; or three parts for the pattern and half the neck, one-third (of the half) showing the front and lowest part of the neck; the next again higher; and at the back, or nape of the neck, the highest part of the body.

Length of the back.—The measure is taken from the nape of the neck to the waist.

Width of the back.—The measure is placed at the top of the "side-pieces" from one arm to the other, drawing measure somewhat tight.

Size of the armholes.—The measure is passed under the arm and made to meet (without being tightly drawn) at the top of the shoulder.

Width of the shoulder.—The measure is placed from side of the neck to slope of the shoulder.

Width of shoulders from one side to the other.—The measure is placed across the back, from shoulder to shoulder.

Length of the arm.—The measure is first laid *under* the arm and taken to the wrist, then from the shoulder and carried over the elbow (which must be slightly bent to allow of free action in the sleeve) to the back of the wrist.*

It is necessary to take the *two* measurements of the height of the shoulder because the form of the shoulder causes a curve from the neck to the turn of the arm; and as this curve is more or less pronounced in different figures, it is necessary to take *first* the height at the neck and *secondly* near the arm. If these instructions are carefully followed little or no difficulty will be found in fitting even the most exceptional figure.

MAKING UP A DRESS

In fitting the bodice put the edges of the front together and pin it, first loosely, afterwards tightening it by putting another row of pins behind the first. Do not make it tight, for nothing looks worse than a front which drags across the chest. The seams under the arms and upon the shoulders generally require a little shaping to the figure, however carefully the pattern may be cut. To make up the skirt, first place the breadths together in the right order, and then lightly tack them together ready for the machine. In the case of a skirt being lined throughout, the lining must be cut exactly the size of each breadth and *tacked to it all round* before the breadths are stitched together.

A dress stand is a great help to the amateur dressmaker, enabling her to see how the skirt hangs, one of the most important points in a well-made gown. Accurate cutting should ensure the right length all round, but the arrangement of any fulness at the waist can be better done on the stand. A "dummy" figure is also a great help in the making of blouses.

TO MAKE PATTERNS OF "MADE UP" GARMENTS

There are three methods of doing the above. In the first, measurements of the length and width of the principal parts of the garment should be taken and from these a paper pattern can be drawn and shaped. Or thin paper may be pinned flatly over the parts and the outline obtained by means of pin-pricks or a tracing wheel. When cut out this will at least give a rough shape, from which a better pattern can be

formed. When cutting the latter one must not forget to allow for turnings.

A third method is to lay the garment, from which the pattern is to be taken, flat upon paper; place strong needles along the seams and curves, then gently lift the material off the needles and draw a pencil line from needle mark to needle mark.

This kind of work requires infinite patience and it is a great help if certain parts of the garment can be unpicked and used as a pattern in the ordinary way.

TO ENLARGE A PATTERN

It is a mistaken idea to imagine that a pattern intended for a small, slight person can be made to fit a taller and stouter one simply by cutting it larger in *every direction*. In order to enlarge the shape correctly one must take measurements of the person one wishes to make the garment fit, and enlarge the portions of the pattern *according to those measurements*.

TO REDUCE A PATTERN

To reduce a full sized pattern to half, third, or quarter size, the full size measurements must be divided by 2, 3, or 4. Thus if one wishes to reduce a pattern to half its size one must allow for half the length, half the width, and half the turnings. In this way the various parts will retain their proper proportions.

ADAPTING TO FASHION

Though fashion unceasingly varies the forms and names of garments, no change can alter the foundations upon which they are made, and nothing is easier than to modify according to the caprices of fashion, or to suit particular requirements. Practice alone is needed in order to succeed in making any article of clothing.

If the generally fixed rules with regard to the cutting out of a pattern are thoroughly understood, it is quite possible to make up the most elaborate and up-to-date garments by ingenious alteration and modification of the simplest "old fashioned" shape.

The art of "adapting" in this way enables the skilful workwoman to "create" a pattern of her own—by

which she can suit her own taste or fancy.

MATERIALS FOR ORDINARY ARTICLES

Men's Night Shirts require 4 yards of stout calico, or twill, 36 inches wide. The length required for **day shirts** depends upon width of shirting used. There are various kinds of materials used for men's day shirts, such as Oxford shirting, galatea, prints, linen, flannel, etc. These vary in width from 28 to 32 inches— $3\frac{1}{2}$ yards is the *average* length required for a day shirt.

Men's Pyjamas are usually made of flannel, flannelette, or linen and require about $5\frac{1}{2}$ yards, according to width of materials and size of garment required.

For a Child's (6 to 8 years) simple Frock, with long sleeves, either $3\frac{1}{2}$ yards of narrow width material (such as silk 27 inches wide) or $2\frac{1}{2}$ yards of wide material (such as cambric 42 inches wide) is required. $2\frac{1}{2}$ yards of 36-inch cambric, long cloth, flannel or flannelette is needed to make a **baby's night gown**.

For a Woman's Under Skirt, or Petticoat, with full round bottom, the average length required would be about 4 yards of 28 inch material. This length varies with height of wearer and width of stuff.

Women's Knickerbockers or Bloomers are usually made of tweed, cloth, serge or homespun for winter wear, and alpaca, foulé, moreen, holland, drill, or flannelette, for summer. The width of these materials is generally from 42 to 44 inches, and the quantity required for a person of average stature is 2 yards. For the lining $\frac{1}{2}$ yard less is sufficient.

The quantity of material needed for a **woman's nightdress** is $4\frac{1}{2}$ yards of 40-inch width, or 6 of 30 inch width material.

$1\frac{1}{2}$ yards of 30-inch linen or holland are needed to make a **woman's cooking apron**.

For a medium-sized Woman's Combinations 3 yards of 36-inch longcloth is sufficient.

An easy way to make rough calculation of quantity of material required

to make most ordinary garments is to allow twice the length of the front, with an extra $\frac{1}{2}$ yard added.

MAKING CLOTHES

Right and left side of Garment.—Remember that the right, or left-hand, side of a garment is spoken of as it would be *when on the wearer*, and not as it appears when facing the worker.

All men's and boy's clothes fasten "*left over right*" and women's and girls "*right over left*."

How to join Sleeves and Legs of Garments.—When joining sleeves begin from the wrist upwards, and drawer legs from the knees upwards—any slight unevenness can always be cut away at top of sleeve, or seat of drawers, without spoiling the set of the garment.

How to Insert Sleeves.—Sleeves which have an upper and under piece shaped to fit the top of the shoulder and hollow of the arm must be faced and folded for the *right* and *left* arm before material is cut out. It is a common mistake for beginners to make both sleeves for the same arm. Sleeves of this description are inserted in armholes with the *front*, or under, seam of the sleeve fixed about $2\frac{1}{2}$ inches in front of the under arm seam of the bodice. The *exact* position of the seams depends upon the size of the garment, but, in this make of sleeve, the under seam should always be *in front* of the under arm bodice seam. The upper and under part of some sleeves are shaped alike, the only difference being in the "way of the stuff." When this is so the *selvedge* part of the sleeve should be fixed at upper part of the arm and the *slanting* side to the underneath. To ensure the correct making up of sleeves cut in this way the material should be first folded for right and left arms. These sleeves are usually put into armholes with the *seam of the sleeve exactly to the seam of the garment*.

Care must be taken that the armhole is not larger than the sleeve. Although the form of the sleeve often varies, there is one rule which never changes, and that is that the outer side of the arm is always longer by $2\frac{1}{2}$ inches than the inner or sloped side.

Making Bands.—When putting a band (which should be made *selvedge* way) on to the *west* edge of material whether it be straight, tucked, or curved, the garment should be *slightly* eased in and the band stretched as much as possible, as this will avoid puckering and ensure a good "set."

A circular, or shaped band, is cut in *one* piece, with the selvedge of material. *down* in the front, *slanting* on hips, and *across* the spine. This kind of band is always made in double material. It is not intended to fit closely round the waist, so an easy measurement should be allowed.

There are two ways of cutting a yoke, one is with a join on the shoulder and the other is with no join on shoulder. The latter is known as a "saddle joke." All yokes should be lined.

When at work a needlewoman should hold the work level with her chest, and care should be taken that the stitches are not *drawn back*—that is to say, that they are not *gathered*.

It is an excellent plan always to leave three-quarters of an inch everywhere for turnings and two inches down the front of a bodice. In case of a mis-fit it is well to have four inches of turnings to fall back upon.

When woollen braid is used for binding the edge of a dress it is a good plan to previously scald the braid with boiling water, and dry, as otherwise it is apt to shrink and give a puckered appearance to the bottom of the skirt.

Fastenings.—A button-hole should always be made *before* the button is sewn on, but, of course, care must be taken to make the length of the hole correspond with the size of the button to be used.

When making button-holes it is easier to work them if they are previously sewn over lightly with silk. They should be cut with a sharp pen-knife, or scissors specially made for the purpose. Tailors' twist should be used for working them, and three-quarters of a yard will work a large-sized button-hole. In working button-holes the usual order of things is reversed and one works from left to right instead of from right to left.

The stitches must be set very closely together and the silk put round the needle while the latter is in the stuff. This method helps to keep all even and smooth. Loops are sometimes used as a fastening for buttons. They should take the place of button-holes on insertion, embroidery, or lace—or on very narrow bands. The loops should be made on the *under* side of the material in most cases. One is apt to be deceived in the size of a loop—and it often happens that one which appears the correct size in the making is too small when it comes to buttoning—loops should therefore be made a trifle larger than, at first, appears necessary to the worker.

When fixing hooks and eyes be careful that the loop of the hook does not extend quite to the edge of the material and that the eye is fixed in such a way that the necessary overlapping is allowed for.

Trimmings.—The *very least* that should be allowed for most trimmings is once and a half again the length of straight edge to be trimmed, a little *more* is an improvement. Trimmings should be suited to materials, such as a fairly strong embroidery for calico or flannelette, and lace for fine cambric. Some trimmings and laces have a thread at the edge which can be drawn up to the required fullness. This is a great saving of labour and time for busy workers.

When trimming a garment place the right side of trimming to right side of garment and be careful to begin in a place where the join will be hidden as far as possible.

It is not always necessary to run or gather trimming before sewing on to garment—it can be slightly eased by movement of the left thumb while being sewn on. All trimming should be halved and quartered and the fullness equally distributed along the part to be trimmed before commencing to sew on. The trimming should be held *facing* the worker while sewing. When finished *flatten* sewing thoroughly.

To cut embroidery evenly cut an inch or so carefully, then fold over so that the edges of the pattern match.

Continue this as you go along and the cutting will be even.

MAKING UNDERCLOTHING.

A **Man's Day Shirt** is made of several parts, of which the chief are :—

- 1 The body of the shirt (back and front pieces.)
- 2 The shirt front.
- 3 The sleeves.
- The accessories are :—
- 4 The shoulder-piece.
- 5 The collar.
- 6 The wristband or cuff.
- 7 The gusset.
- 8 The collar band.
- 9 The tongue.

It must be remembered that the back width, or half of the shirt, is always larger than the front by about three inches; besides this the two side seams are not joined right down. A division must be left of about $3\frac{1}{2}$ inches, at the top of which a small gusset is placed.

The most usual mistakes in the making of a shirt are :—1st, not giving sufficient slope to the neck (when sloping this out of the shoulder-piece it is best to refer carefully to the size of the wearer's neck); 2nd, the shoulder-piece being too large, thus giving too great a width across the chest, which causes the shirt to gape open and bulge, and also makes most uncomfortable folds round the arms.

The button-holes are made on the *left* hem of the shirt front. Three or more can be made, and, if studs are to be used, a small button-hole must be placed at each end of the band on the neck and two on each cuff.

The *tongue* is placed beneath the lower edge of the shirt front and on it is made a button-hole, which, being fastened to a button on the waistcoat, is intended to keep the shirt front in its place.

Women's Under-garments.—Sloping bands that fit closely over the hips now take the place of the straight ones that used to go round the waist of petticoats and drawers, etc.

Petticoats should be *seamed* at the top to fit smoothly without any fullness, then set into a well-cut band, which should lie without a wrinkle. The hip band of a flannel petticoat should

be deep enough to come to the edge of the stays, and the petticoat should be short and not very wide.

The *easiest* way to make a chemise is all in one piece. Measure the length of calico required, then double it over and tear off. Next, lay the edges neatly together, fold over again, bringing the four selvages together; then lay on your pattern and cut, leaving the full width at the bottom. Having hollowed out the neck, a little more in the front than at the back, cut a band the size required and some narrow crossway bands to hem the sleeves, also a small piece to line the plaquet in front.

The front of the garment may be either tucked or gathered, and trimmed according to taste.

Drawers should be cut from a suitable pattern, each leg in one piece, allowing no fullness in front, and set into a sloping hip band. If knickerbockers, they should be gathered into a band that will just pass comfortably over the knee.

Combinations consist of chemise and drawers cut in one. This garment buttons to the end of the bust in front, the gathers at the back being mounted with a narrow band. In other respects it is made and finished like the ordinary chemise and drawers. Petticoat bodies are best made perfectly fitting and plain.

Nightdresses vary in cut and style, but the most comfortable and best wearing are those set into a yoke with tucked and insertion fronts.

HOUSE LINEN

Sheets.—Making sheets depends in some measure on the quality of the material to be used. All sheeting is sold in double and single widths. The former is made expressly for the purpose and is from two and a half to three yards in width.

When measuring the bed for which the sheet is intended an additional quantity is always allowed in order to turn well over the bolster and tuck in under the mattress at the feet. The *best* sheets are nearly double the length of the bed and when the upper one is turned down it reaches almost to the foot.

The ordinary calculation of the length of sheets is from three to four yards. This length is used in double width, or double the amount in single width. For a small bed, however, two yards and three-quarters to three yards of double width is sufficient for each sheet, or, as before stated, *double* this quantity in single width.

For sheets made in material of double width it is only necessary to hem them at the ends, and it is thus that the end is distinguished from the sides. The hem at the top ought to be *twice as deep* as that at the lower end. If single width material is used the sheet must be joined by a seam. For best sheets the upper hem is often edged with embroidery, or the top part of the sheet itself, which folds over the bed, can be embroidered. There are two methods of making sheets in which economy and a good appearance are combined. To carry out this idea two different sorts of material are used, one of ordinary and the other of better linen—the latter intended to form that part of the sheet which folds over the bed. The first way of making is by simply joining the two widths together, and the second is by placing the better material as a border round a width of that which is stronger, or commoner. This last plan is the most economical, because one width of fine linen cut in two is sufficient for a pair of sheets. This, however, takes longer to make, because three seams are required to join the border at top and sides (it is not necessary to put a border at the bottom of sheet). Also, when made in this way, a hem must be made entirely round the sheet. The material, however, may be so contrived that the selvedge edge is left at one side of the sheet, and so avoid hemming all round.

Pillow Cases.—Both square and long cases are made, the sizes of which ought to correspond exactly with that of the pillows, or bolsters, for which they are intended. The material of which the cases are made is about three-quarters of a yard wide. Double the length of the pillow, allowing also for the hems at the edges of the opening, is required for a case. For a

pillow of nearly a yard, two yards and a quarter of material would be requisite. This is folded in the centre of the length, and sewn like a bag, joining the edges at the selvedge. The edges of the opening are then hemmed from one to three inches in depth, according to whether an ordinary or a better pillow-case is required. To keep the pillow in its place two or three pieces of tape are sewn at the back of each hem and tied together when the pillow is in the case.

For *better pillow cases* the material is not folded exactly in half, because one of the halves of the case ought to be larger than the other, to the depth of the hem. This, when the case is sewn together, will be folded over the shorter side. These cases are closed by buttons and button-holes, the former placed in the upper hem and the latter in the lower. Pillow-cases can be trimmed with different sorts of lace or embroidery round the edge of the case, or the upper part of the pillow-case may be embroidered. It is often found that buttons are frequently broken in the washing, and therefore one is continually having to sew new ones on. German housewives have a very good plan for fastening pillow cases, which does away with the broken button trouble. *Three* button-holes are placed on *both* *hems* of the pillow case. A wide tape, cut in length equal to the distance from the first button-hole to the third—with a little over to allow for a hem at each end—must have three buttons sewn on it in a position to correspond with the button-holes. Pass the buttons through holes from *under* side of hem and then through the upper hem. This tape can easily be removed when the case is washed, and, with proper care, will last for years.

Towels.—The material intended for towels is always half-width and generally of diaper-pattern linen or huckaback, a material made expressly for the purpose. Usually they are a yard in length, and a narrow hem is made at either end. In some cases the edges are fringed, or ravelled out.

Table-Cloths.—Damask linen, which can be produced in patterns or striped, is manufactured expressly for table-

cloths, and is made also in double width. Cloths may also be obtained of different sizes, and then they have a border running round the edge, and only require hemming at either side or end. If, however, a table-cloth has to be made of two single widths of material, great care must be taken to make the pattern exactly correspond in the centre of the cloth, sewing the two widths carefully together.

Table-cloths can be very costly, having in some cases the coronet, crest, monogram, etc., woven in the pattern of the damask in centre of cloth. Cloths intended for ordinary use are two and a half and three yards in length, the width being in the proportion to the length; these are for the usual long dining-tables.

SIDE CLOTHS.—These are small cloths one width wide, placed during dinner on the large table-cloth, and withdrawn after dessert.

SERVIENTTES.—For these striped linen, or damask of the same pattern as the cloth, is used; they are always cut exactly square, and hemmed at the ends. If striped damask is used great care must be taken to cut the napkins so that exactly the same number of stripes are in each.

Kitchen Linen.—For kitchen use the linen should be especially strong. Kitchen table-cloths are made of coarse linen, generally having a pattern in squares or stripes; this can be bought by the yard, and is hemmed all round.

GLASS CLOTHS.—Cloths used for drying and polishing glass articles ought to be of a fine texture, and always of all linen. Coarse cloths are used for drying plates, dishes, etc. All cloths of this description should be about a yard long, and hemmed at each end, the material sold for them being of the right width and having a selvedge at either side.

KITCHEN ROLLERS.—These useful articles for kitchen use are made the exact width of the wooden roller upon which they are to be hung. Towelling is made expressly for this purpose, about half a yard wide. The length to cut the towelling is from a yard and a half to three quarters. The two ends are firmly sewed and felled together

and the towel passed over the wooden roller and fixed into place.

PLAIN SEWING

The cotton for sewing should be of equal texture to the thread of the material it is intended to work upon, except in the case of stitching, when a coarser cotton may be used. Care must be taken not to use too long a needleful and the thread ought always to be cut and never broken off. In every class of stitch care should be taken that the stitches are even and placed at equal distances. According to the texture of the work they can be near or far apart, so can the work be finely or coarsely done. When working on fine linen the necessary regularity of the stitches can be obtained by counting the threads.

STITCHES

Slip or Running Stitch.—*a.* (See Needlework illustration, Fig. 1.) This is done by constantly running the needle into the material in front of the stitch just formed. Several stitches may be taken on the needle at the same time before drawing the cotton through. This stitch is generally used in making the seams of a garment, whether in silk, cotton or woollen material. It is as well to place a back stitch here and there in order to strengthen the seam.

English Stitch.—*b.* For this the needle is directed in an upward direction on the cross, for which reason it is much stronger than any other.

Back Stitch.—*c.* This is done in two ways—first, going from right to left, the needle stitched into the work behind where it has been drawn out, in order to take a stitch of the same size in front. Passing from left to right, the needle is inserted in front of the stitch last formed. Proceeding thus causes the stitch to appear on the reverse side as shown at *a*. For this reason it is frequently used for turn-down seams.

Stitching.—*e.* This is composed of a row of back stitches without any interval between them, the needle being at once inserted backwards into the stitch just made to be drawn out at an equal distance in front of the

stitch which has to be formed. Extreme regularity should be observed in this class of work; this is obtained by counting the threads of material for each stitch, more or less, according to the required size of the stitches. Stitching is facilitated by drawing a thread at the place where the work is intended to be. If it has to be done on the cross, or in other material besides calico, it is advisable to make a tacking with some bright-coloured cotton in order to guide the needle, but when it has to be straight it is not difficult to keep it perfectly so by drawing out a thread or by making a fold across the material.

Hem Stitch.—*f.* This stitch is employed to fit a hem in any stuff, the needle to be placed under the material to be drawn out about two threads above the edge.

Side Stitch.—*g.* By the help of this stitch the folds, or rather the folded edges, of two pieces of stuff are joined together; the stitch is made slantingly in the opposite side to that which is held towards the worker.

Sewing Stitch.—*h.* This is employed to join two edges of material. The needle, directed over the edges, stitches through the outer fold and comes under that which is held nearest the worker. A depth of some threads should be observed. This stitch is used to join the two selvedges of calico or other cloth and is called *sewing a seam*. Great regularity is required for the stitches of such seams.

Herringbone or Cross Stitch.—*i.* This is used to join two edges of material which, instead of being folded together, are laid one over the other and worked from left to right, making alternately a stitch below and one above. The cross stitch is made by the thread being drawn out each time above the stitch which has just been done. This stitch is used particularly for making flannel garments.

Button-hole Stitch.—*j.* This is used in making button-holes. The stitches are taken from left to right in the slit of the button-hole, to be drawn out at an even distance all round, making the thread form a species of knot. This is done either by holding it with the thumb below the needle or in

casting it upwards; the thread is drawn out gently towards the slit, upon the edges of which the knots ought to be formed. It is of importance to remember when making button-holes to place some stitches at *either* end of the hole so as to give it a nice appearance, and to ensure its wearing well. This stitch is also used for making eyelet-holes, loops, etc. The threads which form a loop are held together with button-hole stitch.

Chain Stitch.—*A.* This is done in a similar manner, but the stitches are like rings chained together. The needle is held straight, and always placed in the last ring or stitch, to be drawn out an equal distance to the length of the following ring; the cotton is to be held below the needle.

Oversewing is sewing with very wide stitches to prevent the edges of stuff ravelling out.

SEAMS

The stitches already explained serve to make different classes of seams, which can be called simple or double. A simple seam is that which is finished at once—for example, the hem of a handkerchief or garment. Double seams and oversewing exact double work. The former are frequently made with two sorts of stitches, such as turned-down seams, those turned up and those flattened out, etc.

A Turned-down Seam is used when it is desired to give extra finish to any work. Two pieces of material are joined so that one side is higher than the other. One side of the seam is made either by the "English Stitch" *b*, or by Running Stitch, *a*. When this is done the material is unfolded, so as to flatten out the sewing, then the longer side is turned down in a tiny fold and hemmed. These seams, which should be as much flattened as possible, are made, with few exceptions, very narrow.

A Turned-up or French Seam.—This is used in fine linen and light stuffs. Two pieces of material are joined together near the edge. A running or slip stitch is used. When this seam is finished the work is turned so as to make a similar seam at the back and close to the first. These

seams are often employed for sleeves.

Flattened Seams.—These are used in making the seams of garments. After the two pieces of stuff are joined, either by a simple running, or a back stitch, they are opened, and the garment laid upon an ironing-board and a hot iron passed quickly over them. When this has been done the edges of the seams are fixed to the garment in various ways. It is best to use a cross-stitch or to run them down, taking care that the stitches do not go through to the right of the article. Sometimes the edges are covered by a narrow ribbon being run on to the selvages of both sides above the seam. To do this both sides of the stuff are brought together and the ribbon sewn over them. This is frequently done to cover the seams of unlined jackets. *After they have been ironed out* the rough edges are drawn up together and the ribbon bound down on each side over them. Sometimes the edges are kept in their places by a ribbon being sewn over the seam itself. This is useful for seams on the cross. The seams of shirts and under-linen, unless they are sewn together, are made by simply running the width together and hemming, or felling them down.

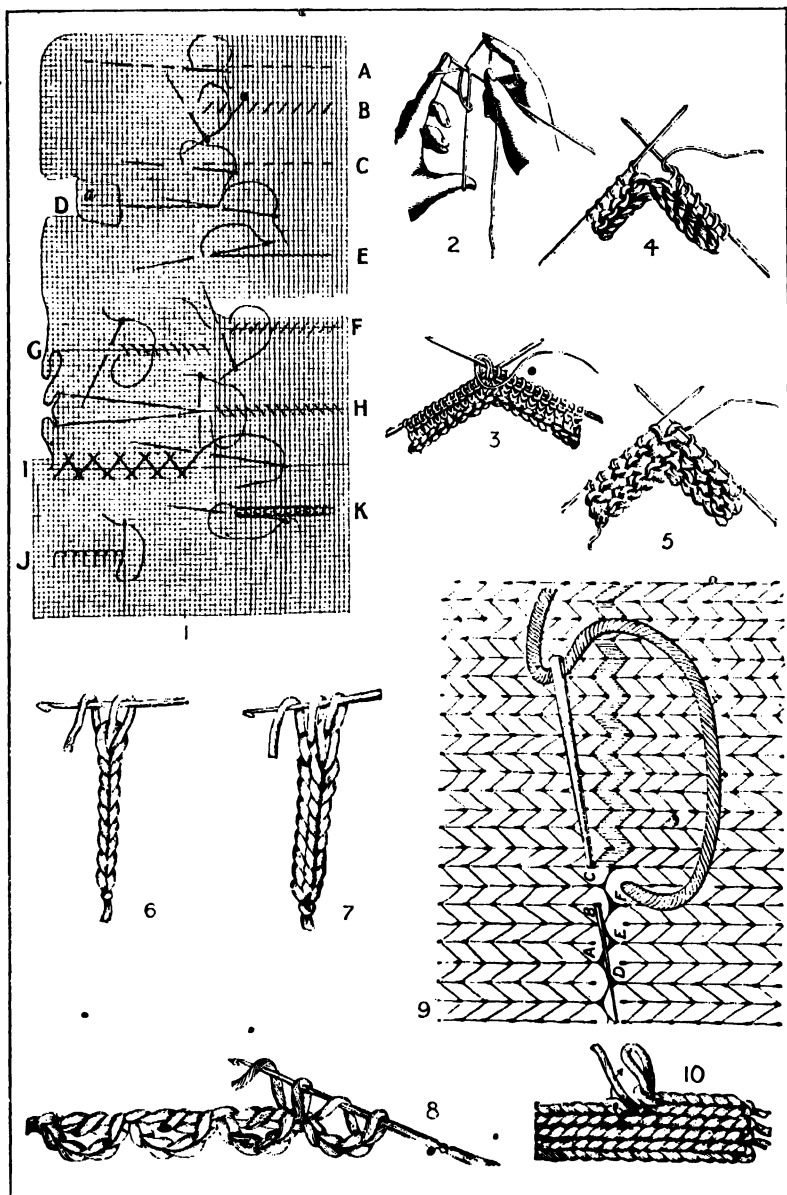
A Double Hem or Hemmed Seam is used to join pieces of material of moderate thickness, folding them down together, and at once hemming the seam, dispensing with any other stitch.

Rolled Hem.—This is made in fine linen, light stuffs, etc. It is prepared as required—that is to say, by rolling the edge of the material between the fingers while sewing.

Whipped Scroll.—This is prepared like the foregoing hem; the difference exists in working the needle over the edge, so as to take several stitches at the same time. This "whipping" is generally used to make tiny frills, as the thread, if taken loosely, can be drawn up to form a gathering.

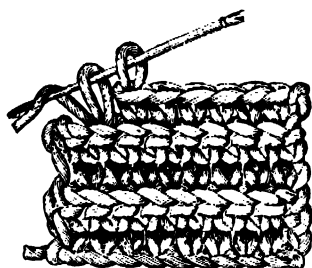
Gathering is formed by Running Stitch *a*. The stitches for running cannot be too regularly made, but are larger or smaller according to the thickness of the material. One needleful of thread is alone used to make a

NEEDLEWORK, No. 1.

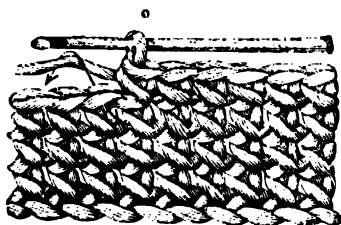


1. Stitches. 2. Casting On. 3. Purling. 4. Increasing. 5. Decreasing. 6. Plain Foundation Chain. 7. Double Foundation Chain. 8. Purl Foundation Chain. 9. Invisible Join. 10. Slip Stitch.

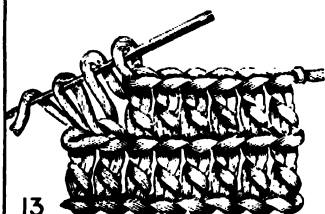
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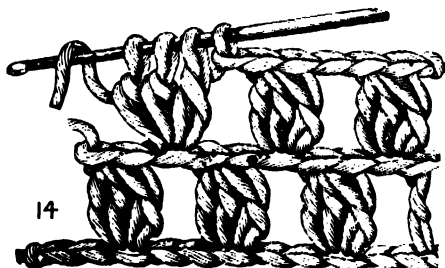
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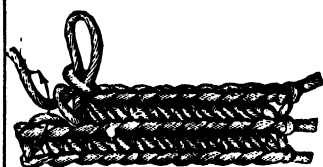
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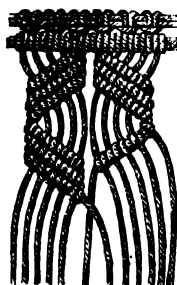
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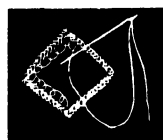
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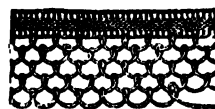
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18



16



19

11. Ribbed Stitch. 12. Cross Stitch. 13. Treble Stitch. 14. Open Work Spots.
15. Slanting Stitch. 16. Cord & Macrame Knot. 17. Diamond Pattern. 18 & 19.
Diamond Stitch.

gathering. This is never broken off until the running is finished. When the gathering is of requisite length it is *firmly fastened off* at the end. This must be carefully seen to, as few things are more irritating than for the thread to run back and all the work to come undone. The running must be graduated, it being above all necessary to equalize the gathering. This is done by taking a strong needle or pin and stroking down each pleat of the gathering separately, so that it is all equally divided.

Double Gathering.—This consists of two or more rows of gathering more or less apart, the stitches of which are exactly over each other.

Puffing.—This is made like double gathering, but leaving a greater interval between the rows of gathering, the stitches of which go the reverse way—i.e., one line is run in one direction, and the lower commences at the reverse end.

Sewing on Tapes, Buttons, Hooks, etc.—To sew on these different fastenings always use very strong cotton in order to avoid a great number of stitches. Tapes are turned in at the end which is to be attached to the garment, and are fastened down by stitching simply round the edge of the fold, which should form a small square.

Different buttons require different methods of fixing on. For those having holes, such as pearl and linen buttons, it is sufficient to pass the needle through one hole into the material, and back again through the other hole several times, ending by winding the thread four or five times *round* the stitches passed through holes, between the button and the material, and fastening it off at the back of the garment. Some buttons are made with "tails," and these are fixed on from the wrong side of the garment. If the material on which the button is to be sewn is not strong, it is requisite that a round piece of lining corresponding to each button be fixed on the reverse side of the garment. This piece is fastened down by a series of back stitches. To this the button is attached by stitching taken to the outer part of each little round piece.

DARNING.

A brief way of describing a darn is a perfect lattice-work of cotton, or wool, worked over a hole. There are many sorts of darns, which may be classed thus: 1. A plain darn; 2. Crossed darn; 3. An opened or figured darn; 4. The invisible or joined darn. All these should be made at the back of the article in need of repairing. Some people find it easier to darn over a hard surface, and darning "eggs" or balls are sold for this purpose. For all darns what may be called a *warp* and a *woof* have to be formed, and a flat thread, whether cotton, flax, silk, or wool, always *finer* than the material itself, is used.

Plain Darning.—This is used to repair a rent. Before commencing, the edges of the worn or torn part ought to be equalized and cut even; often it is as well to form the part to be repaired into a *square*. The threads for the *warp* are then drawn by the needle from one side of the hole to the other. These should not commence at the extreme edge of the hole, but be taken from about $\frac{1}{2}$ an inch from it. The thread must never be pulled *tight*, but a tiny loop left at each end. The threads are laid close together, no interval being between them. The needle making the warp raises and flattens alternately the two edges of the tear—that is to say, that first it will pass under the edge in order to come out at a distance of two or three threads beyond, and in returning, the needle will pass over this edge in order to slip under that which is opposite. This is to be done until the warp fills the hole. The woof is made in the opposite direction to the warp. The needle carries the thread through the former, raising and lowering alternately each thread. This is again reversed at each turn, the needle always taking up the thread which has been previously left below. To form a very even woof the needle must press the threads from time to time closer together. Of course, this will not be necessary unless a very close darn is required. The edges are to be flattened by the thimble.

Another way of making a plain darn is to form the woof by taking *two threads* upon the needle and leaving one

beneath. The thread left in the first row is in the second taken on the needle with one of those already taken up. The third and following rows are made like the second, only alternating the threads.

A Crossed Darn on the Cross.—This is done by forming the woof on the cross. The first thread of this is taken through the warp in the centre of the tear, in order thus to divide the hole into two equal parts, filling first one half and then the other. By this method greater regularity is observed in the stitches. It is as well to fit the worn part over a hard surface for this darn.

Open or Figured Darn.—This is done like a crossed darn. It is in the woof that the pattern of the material has to be imitated. Two, three, or four threads are taken upon the needle, according to the required design. Then the usual woof is continued—that is to say, when there is one, because often the patterns of checks, stripes, etc., form a perfect ground of themselves. This kind of darning is used for repairing table linen. If carefully mended good damask does not lose its beauty when old. Do not set aside only the cloths with actual holes in them for darning. If the thin places be strengthened by neat darning with fine linen thread, it will prevent holes appearing. Imitate as nearly as possible the weaving of the pattern, and darn as far as possible under the outer thread when it is on a pattern.

Hidden or Joined Darn.—This is only done when the edges of the tear can be joined naturally; or again, in a species of patching which will be explained in the next article. Care must be taken in these repairs to equalize the edges, or to cut away the ravelled threads which are generally to be met with, and thus to render the repair almost invisible. For a hidden repair it is useless to make a warp; the edges are simply joined in the woof. This will be quite simple for linen and crossed in other stuffs. In other materials it is sometimes necessary to use the ravelled threads of the stuff in order to carry on the different shades in the material. When it is a question of repairing cloth, only *half* the thickness is worked upon.

PATCHING AND PIECING

There are three sorts of patching. 1. Patching by overcasting; 2. Patching with a turned-down seam; 3. Patching by darning or joining.

As a general rule when a garment requires a patch the torn part must be taken away, with all the worn part near until sufficient resistance is found in the material of which the garment is made to support the new piece placed on it. The hole into which the patch has to be placed is to be cut straight and quite square. About a quarter of an inch ought to be allowed all round the new piece, in order to make the seam. Except for a darned patch it is requisite to cut a little notch, of some form or six threads in depth, in the corners of the square hole out of which the old piece has been taken. If the material to be patched has a pattern, care must be taken to make that on the new piece exactly correspond to that on the article itself. The selvedge way of the patch should run the selvedge way of the garment, or article, to be repaired. It is advisable to tack the patch in place before commencing to sew it on properly.

Overcasting Patches.—In order to do this a little fold is made at the back to the depth of the notches upon the edge of the rent. A similar fold is made upon the patch itself, and tacking that upon the part to be repaired it is to be overcast all round, care being taken to keep the parts clear of each other, and to make the corners well. The seam should be flattened down by the thimble, the edges turned down and lightly over-sewn. This class of repair, although frequently employed for linen, is especially used in other materials. There is also another way of piecing by overcasting, intended for worn linen and in thick stuff. For this the worn or torn part which has to be cut away is only done so after having laid the piece upon that part and overcasting or sewing it there. It is better before doing so to tack it carefully all round. The torn part cut away on the wrong side ought to allow all round its edges sufficient to make a good turned-down seam, which completes this class of repair. When patching flannel the edges of material are not

turned in and the stitch used to fix the patch is herring-bone.

Piecing by a Turned-down Seam.—This is prepared like the foregoing. It is sewn, either by overcasting or running, so that the right side (or where the stitches are placed) is always found above the turned-down seam. In this patch the corners are very difficult to form, and done by unpractised hands are sure to gather up. It is precisely this detail which forms the greatest difficulty in patching. In order to make the corners well it is necessary to keep to the straight thread for the seam, and when the notch is arrived at care must be taken to seize with the last stitch the last thread of the selvedge or of the welt, following the course of the sewing into the side of the notch and never a thread beyond. In order to sew the next side the first stitch is taken with the first thread in the notch in the opposite side, and thus following for each corner. When the piece on the back or wrong side is sewn the flattened seam is then made, folding the edge down upon the article which is mended.

Piecing by a Seam.—This is rarely used for linen except when it is necessary to repair something very fine and delicate which has been torn by accident and not by wear. It is serviceable in very clear stuffs, such as muslin, etc., when there is only a little tear. It is frequently used in other materials, especially in woollen and always in cloth stuffs.

In order to place these last named pieces it is useless to cut notches in the sides, as the patch is cut exactly to the same size as that taken away; about the depth of two or three threads may be left halfway round the piece so as to make a tiny turning by which to fit it into the hole. It is kept in its place by the aid of a tack like a darn, and then the stitches are joined by the invisible stitch explained in the article "Hidden or Joined Darn." The thread used for this ought to be finer than that of the material itself. On cloth a fine sewing silk is used, and only half the thickness of the cloth is used. When the piece is sewn in, the work is turned on the right side so as to slightly raise with the needle the nap of the

cloth upon all its repaired sides. This renders the patch completely invisible, and after this it is requisite to pass a hot iron over the *sewed edges at the back*, as this greatly improves the appearance of the repair.

THE CARE OF CLOTHING

is the secret of economy. Dresses, when taken off, should be well shaken, and, if silk, dusted; if of woollen material thoroughly brushed. Mantles and jackets the same. Underclothing becomes spoiled and discoloured if put away damp. It should therefore be thoroughly dry and unstarched when put away till the following season. Gloves are better not folded together, but laid in a glove box when taken off. Boots should be dusted after having been worn in dry weather, and dried, *at some distance from the fire*, if wet.

Dresses should not hang too long on a nail, as they get into folds that do not look well when the dress is worn. Folded *smoothly*, they should be laid in a drawer. Bonnets and hats should be carefully dusted before being put away. Such articles of clothing as are kept in drawers should be neatly folded, and loops attached to bodices and skirts to hang them by.

TO TURN A DRESS

This task is much more difficult than is that of making a completely new dress. The first step to be taken is to pick the dress to pieces. A small, sharp-pointed penknife is better than a pair of scissors for this purpose. If the material should be silk, all the pieces must be shaken, dusted, and brushed with a soft brush. Should this not work sufficient renovation sponging may be necessary, and the best preparation for freshening black silk is obtained by boiling a black kid glove for two or three hours in a quart of water. When the mixture is cold the breadths must be thoroughly sponged with it, on both sides, and afterwards folded up and laid on a clean cloth or towel. When all are finished, the silk should be rolled up loosely in the towel and left till the following day, when it should be ironed on the side that is to be turned

in when the dress is re-made. The kid-water has the effect of renewing the black, and this process thoroughly cleanses the silk without imparting the disagreeable stiffness that so often characterizes cleaned silk.

The water in which ivy leaves have been boiled affords a good means of cleansing and restoring black cashmere that has got out of condition.

It is always well to line a "done-up" silk skirt. If not, the silk is likely to split sooner than it would without the support of a lining. It also prevents the silk from looking thin, or poor. As soon as a dress is worn or frayed at the bottom repair it by putting a new lining in, or braiding.

If coffee, tea, or chocolate should be spilled on a dress, no matter how delicate the fabric may be, use a clean white cloth and clear cold water to wash out the spot immediately after the accident, before the liquid has time to dry; and in nine cases out of ten the dress will never show where the liquid touched it.

TO CURL A FEATHER

It is not difficult to curl a feather, especially if it be a good one, but it requires a fair amount of patience and some delicacy of touch. The operation should be begun at the tip. The feather, after having been thoroughly dried, is taken in the left hand. With the right, a paper knife, or fruit knife, is placed at right angles with each frond of the feather, which is closely pressed from the stem to the edge between the thumb and the knife. This close pressure has sometimes to be repeated. Occasionally two or three fronds may be curled together. It is a mistake to curl feathers too closely or tightly.

DYEING AND CLEANING

Sometimes it costs as much to have a dress dyed and re-made as it would to buy a new one, but a dress of really good material can generally be dyed at least once with advantage. Only silks of the very best make will bear dying; cheap silks are apt to become very thin and streaky in the process.

Good gloves will look like new after having been cleaned once, and some-

times they will clean twice and even three times without losing the slight roughness of surface that is necessary to make kid draw on comfortably.

Before sending an article to be dyed or cleaned it is well to ask the opinion of an experienced person as to whether it can be done satisfactorily, as some materials become rotten in the process.

Boots should always be repaired *immediately* they begin to need it, otherwise they will soon get quite beyond the reach of art.

To Freshen a Black Straw Hat.—If the hat is not very far gone a good brush and rub over with a velvet pad will take out all dust and restore the black; but if the straw has become "rusty" mix half a penny bottle of gum with an equal quantity of warm water to which a few drops of good black ink has been added, and apply to hat with a brush.

Straw hats can be painted with a "Straw-hat Polish," sold, in all colours, for the purpose. This process makes the straw rather stiff, but really the effect is remarkably good.

To Preserve Furs, and Clothes from Moth.—Always remember when putting about furs and woollen garments to either well pepper them, or scent the box or drawer in which they are kept with camphor, spirits of turpentine, or cedar-wood.

To Remove Grease Spots from clothes.—A drop of benzine on the grease, rubbed in briskly with a piece of cloth, will often remove the stain; or, spirits of turpentine and a little essence of lemon is a good thing.

To Clean Gold or Silver Lace.—Rub some fine bread crumbs and mix a little blue with them. Lay the mixture plentifully upon the lace, and let it remain for an hour or so. Then brush the crumbs off with a piece of flannel, and finish by gently rubbing the lace with a piece of crimson velvet.

To Raise the Pile of Velvet.—Make a clean brick hot, place a wet cloth over it, and hold the velvet over the steam, which will raise the pile. A hot iron will answer the same purpose.

MILLINERY

The true milliner is, like the true poet, born, not made. Some women

have naturally the knack, or the gift, for a certain amount of artistic talent is required in the perfect arrangement of flowers and feathers, etc. Nevertheless, it is possible to *make* oneself a very successful milliner, with the help of pains and patience.

The fashion in women's head dress changes with the seasons, therefore no fixed rules can be given for the trimming of a hat. But the really skilful milliner has but to take note of a pleasing hat, seen in a shop window, or upon the head of another person, to be able to copy the style with her own materials at home.

A little practice will soon produce those careless-looking folds which look as though they had come there without trouble or intention on any one's part—not even of their own. This is the great art of millinery—to conceal art.

Graceful as feathers and flowers are, they require to be deftly arranged, or they may even look ungraceful. Feathers especially must be firmly fastened at the stems and lightly tacked down at the back, otherwise they are apt to blow about to the risk of their being broken, and with rather a wild effect. The stem of the feather should always be hidden. The finer a feather is, the easier it is to arrange gracefully.

To Bind a Hat.—The material must be cut on the cross. The usual width for a narrow binding is about an inch and a half. The right side of material is laid upon the upper side of the brim of the hat, and carefully stitched to the brim at about a quarter of an inch from the edge the whole way round. Care must be taken not to have a join in the material in the front of the hat, as any inequality, however slight, is very apparent over the eyes. The material is then turned over and under the brim, and is turned in and fastened down with long stitches slipped between the material and the hat. This is easily done on felt, but is rather more difficult on straw.

When the brim is deep and requires to be lined to the full extent, the material—always on the cross—is cut a good inch deeper than the depth of the brim. Allowing twice the measurement of the brim in length, the pieces

of material—probably two lengths—must be joined together. A gathering thread is then run in about half an inch from the edge, and being drawn up, the fulness is evenly dispersed and pinned to the outer rim of the hat. It is then sewed on, but the stitches must not be too small or too close, lest they should make holes in the straw or felt of the hat. Another gathering thread is run through the outer edge of the material, also half an inch from the edge. It is drawn up, the material *very closely* drawn within the brim, arranged in graceful folds, and then stitched into the crown of the hat.

To Line a Brim Plainly.—This requires some care, as the material must be cut to the shape of the brim. Lay the hat crown downwards on the table, place the material over it, and pin it upon the brim here and there. Then cut it round the outside, leaving a good half-inch of turning all round. Proceed to cut away the inside, leaving an inch of turning. When this has been done the brim should then be lined according to the directions given with regard to the *first hat*, in this article, taking care to keep the material in place upon the brim which it was cut out to fit. This is most essential, as the front, and back, or sides of the brim may vary in shape.

To Cover a Toque.—A toque is more easily made at home than any other kind of hat. The quantity of material needed is according to the size of the hat. Material for this purpose should be cut on the *straight*. First, loosely cover the outside of the shape with soft muslin or alpaca, then take the material for covering and lay a corner over the front of the shape, the opposite corner falling over the back. Pin it in folds all round the hat, so as to have the crown soft and full, and the material equally divided round the sides and front. This will need a little care, as much of the appearance of the hat depends on the arrangement of the material. There should be no undue fulness, or the reverse, to be observed anywhere. When the folds are pinned in place stitch all firmly down and cut away the corners and other superfluous parts of the velvet.

To Line a Hat.—A piece of soft silk,

generally white, should be used for this purpose. Tack it all round the crown, turn in the silk, and having hemmed the inner edge and run through it a narrow ribbon, draw the ribbon together and tie it in the top of the hat. Every hat should have a head lining.

FANCY NEEDLEWORK

There are numerous kinds of work, both useful and artistic, which might be placed under the above heading. The following is a list of the various handiworks done, chiefly, with the aid of the needle:—

Embroidery.—Embroidery is used to ornament furniture, such as screens, cushions, curtains, portières, tablecloths, etc., as a decoration for bed-linen, and as a trimming for dresses, handkerchiefs, and various articles of personal apparel.

Appliqué Work.—In this form of embroidery the pattern, which is usually of flowers or leaves, is "applied" on the material, the latter being generally a kind of muslin or net. The "applied" pattern is embroidered round and the surrounding material cut away.

Braiding is a kind of spurious embroidery which forms a handsome trimming for dresses.

Cross-stitch is derived from the old Berlin wool-work done on canvas.

Drawn-thread Work.—The main advantage to be claimed for drawn-thread work is its durability. It is principally used for the ornamentation of house-linen of all kinds and pocket-handkerchiefs.

Ribbon Work.—This work is done with narrow ribbon used instead of silk, as in embroidery.

Smocking.—Used, in ornamenting ladies' and children's dresses and clothes.

Netting is chiefly used for garden hammocks, hand-bags, mittens and fancy articles.

Patchwork.

Bead-work.

Gimpers D'Art.—This is composed upon a square net-work of linen thread, and is generally used for furniture. The square net-work is stretched tightly upon a wire frame and the

pattern is worked upon it with linen, or silk, thread.

Lace Making.

Macramé Lace is a useful trimming for brackets, and various articles of furniture, while the finer make of the lace is sometimes used to trim dresses and underclothing.

Knitting.

Crochet.

Tatting.—This is merely an imitation of crochet work, only done with a shuttle instead of a needle.

Straw Work.—This comprises the making of straw hats and bonnets and the plaiting of straw for trimming &c. Fancy articles, such as photograph-frames, can also be made in plaited straw.

To give the necessary instructions for putting into practice all the above handicrafts would fill volumes; therefore, in the small space at disposal, it is only possible to briefly include those in more common use.

KNITTING

The materials required for knitting are two or more needles of steel, ivory, or wood, and some cotton, silk, or wool. The mode of using these is as follows:

Casting on.—For this only one needle is necessary. Hold the end of the cotton (it should be rather coarse for beginners) between the first and second fingers of the left hand, throw it over the thumb and forefinger so as to form a loop, and pass the needle through this loop. Draw up the cotton so as to tighten the loop. This forms the first stitch. Any number of successive stitches can be formed in the same way. When the requisite number of stitches have been cast on, take the needle on which they are in the left hand. Hold another needle of the same size in the right hand. Pass the point of this needle through the loop of the last made stitch on left-hand needle, throw the cotton over the right-hand needle, slightly tightening it, draw it through the loop of the stitch on the left-hand needle; retain this loop on the right-hand needle, where it forms a stitch. Meanwhile, the loop through which it has been passed is gently dropped off the

right-hand needle. (See Needlework Illustration, Fig 2.)

Plain Knitting.—Pass the right-hand needle into the first stitch of the left-hand needle, at the back, throw the thread forward, and with the first finger pass the point of the needle under the stitch in forming a fresh stitch with the thread already thrown over, as in "Knitting on," only, instead of placing the newly-formed stitch on the left-hand needle, leave it on the right-hand needle, and let the stitch drop off the point of the left-hand needle. Continue in this way until all the stitches are taken from the left to the right-hand needle, when the row is complete.

Purling.—Seaming or purling a stitch is done by taking up the stitch in *front* instead of at the back, throwing the thread over and knitting the stitch as in plain knitting; but before beginning to purl, the thread must be brought in front of the needle, and if a plain stitch follows, the thread is passed back after the purl stitch is made. (See Needlework Illustration, Fig. 3.)

Increasing and Decreasing.—Increasing, or making a stitch, is done by throwing the thread once round the needle and in the next row knitting it as an ordinary stitch. Decreasing is done in two ways: firstly, taking up two stitches and knitting them together as one: secondly, by taking up a stitch without knitting it, called slipping, then by knitting the following stitch in the usual way, and then slipping the first (unknitted) over the second (knitted). (See Needlework Illustration, Figs. 4 and 5.) When it is necessary to decrease two stitches at once, proceed thus: Slip one, knit two stitches together, then slip the unknitted stitch over the two knitted together.

This completes the necessary instructions for the simpler forms of knitting, viz., those which are done on two needles. The same stitches are used in round knitting, but a greater number of needles are necessary.

Round Knitting.—In round knitting four or five needles are used. With this knitting stockings, socks, cuffs, mittens, etc., are made. To knit

with four needles, cast on, say, thirty-two stitches upon one needle, insert a second needle in the last stitch of the first, and cast on thirty stitches; proceed in a similar way with a third needle, but casting on twenty-eight only; when this is done, knit the two extra stitches on the first needle on to the last; this makes thirty stitches upon each needle, and completes the round.

Various Stitches.—**CASTING - OFF STITCHES**, the operation by which a piece of knitting is finished is done by knitting two stitches, and with the left-hand needle slipping the first knitted over the second. This is continued to the end of the row. In finishing off a piece of work, the casting off must be done very loosely, otherwise it will be much tighter than the other rows of knitting.

RIBBED KNITTING is made of knitting and purling alternate groups of stitches. There may be one stitch or more in each group. The stitch that is knitted in one row, or round, is purled in the next.

DOUBLE KNITTING is very useful for making socks (two of which can be knitted on one needle by means of this stitch), shawls, and warm mittens. The stitches for double knitting must be even in number. Knit a stitch, bring the thread forward, slip a stitch off without knitting it, bring the thread to the back again, knit a stitch, bring the thread forward, and so on through the whole of the row. The reason for having an even number of stitches is that the stitch that is knitted in one row must be slipped in the next.

HONEYCOMB STITCH is done as follows: Knit first the stitch, put the cotton over the needle to make a loop, knit two stitches together. Continue making a loop and knitting two stitches together till the row is completed. Then knit a row of plain knitting, another row of honeycomb stitch, and then one of plain knitting.

CABLE KNITTING.—Eight stitches are required for each cable. Add on four more stitches, to do two plain at the beginning and end of every row, and knit a few plain rows for a foundation.

1st row. Purl one, put the wool back again, slip one, knit one, pull the

slipped stitch over the knitted one, purl one, putting the thread twice round the needle, knit four. Repeat.

2nd row. Purl four, knit one, purl two, knit one. Repeat.

3rd row. Purl one, keep the thread forward, slip one, knit one, pull the slipped over, purl one. Now slip the next two stitches on a third needle, and keep them to the right side of your knitting; knit off the next two stitches then knit the two from the third pin.

4th row. Like 2nd, and then begin again from 1st row.

The cable can be made any width.

CABLE KNITTING FOR A STOCKING.—When knitting a man's shooting stocking in this stitch arrange the cable thus: knit three, purl two; the cable; purl two. This gives three ribs between each cable.

BRIOCHE KNITTING.—This is the best stitch for comforters. Cast on loosely, let us say, twenty stitches with any soft wool.

1st row.—Wool before the needle, slip one as if you were going to purl, knit one. Repeat.

2nd row. Wool before the needle, slip one as though you were going to purl, knit two together. Every row is the same.

CHAIN EDGE.—Instead of slipping the first stitch in the ordinary way, slip it as if you were going to purl. Knit all the other stitches plain, as usual. In knitting strips or woollen scarves, this method gives a neat finish.

HOW TO MAKE A MAN'S SOCK

This is an average size; a ribbed sock fits better than a plain one, and requires no decreases.

Use needles No. 15 (Bell gauge) and the best Scotch fingering wool; 7 oz. will make two pairs.

Cast on 84 stitches, 28 on each needle, and rib for $9\frac{1}{4}$ inches (or 122 rounds). If you wish to rib in 3 plain, 2 purl, cast on 85 stitches. There need be no seam-stitch in a ribbed sock.

Heel.—Knit backwards and forwards on 43 stitches for 41 rows, about $3\frac{1}{4}$ inches; a long heel wears better than a short one. Keep 3 plain stitches at the beginning and end of

the heel needle. Knit off the heel needle and now discontinue the ribs for the sole of the foot; you are holding the wrong side towards you; purl 23 stitches, purl 2 together, purl 1, turn back so as to have the right side of the knitting towards you, and you have left 17 stitches untouched. Knit 5, knit 2 together, knit 1, turn back, purl 6, purl 2 together, purl 1. Turn, knit 7, knit 2 together, knit 1. Continue working off the stitches in this gradual manner until the heel is turned. Raise 22 stitches from each side of the heel needle, and in raising them twist them so as to prevent leaving little holes. Keep the 15 ribs even on your front needle.

Instep.—On the right hand side of heel, slip 1, knit 1, pull the slipped stitch over the knitted one, and at the left of the heel knit 2 together. Do 2 rounds and then repeat the decreases; when you have 77 stitches the foot will be narrowed sufficiently. Go on knitting until the foot is $7\frac{1}{2}$ inches long, or 80 rounds.

Toe.—Divide your stitches for the convenience of narrowing; put 39 on one needle, these must be the front part of foot, and divide the sole stitches on the other two needles; 19 stitches on each. Discontinue the ribs. Knit off the front or instep needle, the one with 39 stitches, until you come to the last three stitches; slip 1, knit 1, pass the slipped stitch over the knitted one, knit the last stitch. Go on with the second needle, knit 1, knit 2 together, knit the rest. Go on with the third needle, knit all but 3, slip 1, knit 1, pass the slipped over, knit the last. You are again at the instep needle now; knit the first stitch, knit the 2 next together. Repeat this round, doing 2 plain rounds between each narrowing. When you have done about 2 inches either join as directed in article headed "Invisible Join," or as follows: divide the stitches, lay the needles alongside, and cast off through both sets at once, knitting through 2 stitches at once in the middle, so as to get rid of the 1 extra stitch on your instep needle.

SCALE FOR A STOCKING

Let us suppose you want to knit a stocking in fingering yarn, and have no

directions to work from. Cast on 10 stitches and knit a square. Now lay this square on the sized stocking you want to copy, and see how many times it must be multiplied. This is a much better plan than casting by guess work. Knit 12 ribbed rounds for the top of the stocking, and do not calculate this inch in future measurements; you start from this point.

Leg.—The number of rounds is one and a half the number you cast on; for example, if you had cast on 80 stitches you must knit 120 rounds.

Calf.—Divide your number of stitches by 9 (never mind the odd ones over) and the answer gives the number of intakes. By intakes, is meant decreasing on each side of the seam-stitch, by knitting 2 stitches into 1. Having found the number of decreasing rounds to be made, you must find out how many rounds to leave between. First you must know how many rounds the calf and ankle take up, for they are of equal depth; you must allow for these two parts exactly three-quarters of the number of rounds you had for the upper part. Having discovered this, take the half of the number of rounds for the calf, and after making the first intake, divide the remainder into the distances.

Ankle.—As you have already calculated, is the same number of rounds as the calf.

Heel.—Put half the number of stitches on one needle; when an equal number is not advisable give the extra ones to the heel. The length of heel-flap to be as many rows as there are stitches on heel needle. In picking up the side stitches, increase 1 in 5 to prevent any dragging of the heel out of shape. Avoid making holes as you pick up, by twisting the stitch.

Instep.—Decrease at each side of the foot, leaving 2 plain rounds between each narrowed round, until the number is the same as ankle.

Foot.—Knit as many rounds as there were stitches at the ankle. A woman's small foot is 9 inches long, ordinary, 9½. A tall woman would require 10 inches long. A man's small size is 10; large 11; extra, 12 inches long.

Child's Stocking.—Supposing you have none to measure by, for a child of

five years a woven one would be as follows. The stocking's entire length is 16½ inches from the top to the bottom of heel; the foot's entire length from edge of heel to tip of toe 6½ inches. The leg before decreasing for calf 9½ inches long; the decreasing 2 inches, the ankle 2½ deep, and 2½ inches wide. Of course these measurements are as the stocking lies on the table doubled.

RE-HEELING

Cut away the old heel, but not as much as you intend to renew; fray out the stitches with a needle to the exact size, pull out all small ends of wool so as to leave each loop distinct. Take up the stitches on a knitting-needle and turn the heel as usual; leave the stitches left on your heel needle for a time.

Pick out the ends of wool from the loops at the foot and tack these and the heel stitches from which the needle must be pulled on to a piece of stiff paper. Arrange that the heel stitches come exactly in the middle, put a pin on each side of them to mark the centre, then graft the new heel and the old knitting together (see Needlework Illustration, Fig. 9), and the join ought not to show at all.

GRAFTING

This is the name given to the joining of two pieces of knitting when done by an ordinary needle and thread and not a knitting needle.

After unravelling the knitting to be joined, and freeing the loops from any ends of wool, tack firmly to strong paper, as a foundation or frame to work upon.

Thread the wool-needle with the same coloured wool or cotton used in the knitting, and fasten on, by darning in and out of the stitches, not making a knot. Work from right to left; take up 2 of the upper loops of knitting exactly in the manner shown in illustration Fig. 9, inserting your needle at *c*, bringing it out at *a, b*. Put the needle into the lower piece of knitting 1 loop back at *f*, and bring the needle out through *e*; then put the needle into the upper piece at *b* and bring it out at *a*; then into *e* and out at *d*. Go on thus, working first through the upper

and then through the lower loops. (*See Needlework Illustration, Fig. 9.*)

INVISIBLE JOIN

The ordinary way of joining up the toe of a stocking, or the sole of a baby's boot, is to lay the 2 needles alongside, and cast off through both sets of stitches at once, thus causing a ridge in the work. The following method of grafting together is far preferable, as it does away with all unevenness, leaving the part where the knitting is joined exactly like any other row. A look at the illustration (*Fig. 9*) will be a help when doing this join for the first time. Put half your stitches on the back needle, and half on the front or instep needle; if they are not an even number, knit 2 together before beginning the join. Break off the wool, leaving a length of about half a yard, and thread a wool-needle with it. Note that you are only to pull the stitch off the knitting-needle when especially directed to do so, otherwise you merely put the needle and wool through the stitch, leaving it still on its knitting-needle; you will see that you pass the wool-needle through each stitch twice except with the first 2 stitches.

Put the wool-needle through the first stitch on the knitting-needle as if for purling; put the wool-needle through the first stitch on the back knitting-needle as if for knitting. * Needle through the stitch on front knitting-needle (the same you went through before) as if for knitting, and take it off the needle. Then through the next stitch on front knitting-needle as if for purling; through the stitch on back knitting-needle as if for purling and let it off the needle; through the next stitch on back knitting-needle as if for knitting. Repeat from *. When finished, carefully darn in the end of wool.

The pattern condensed for convenience in following, is simply thus:—

Front as if for knitting and take off.

Front as if for purling.

Back as if for purling and take off.

Back as if for knitting. Repeat.

TOURIST, OR GOLF, STOCKINGS

The fancy "Turnover" which now

adorns the top of men's knickerbocker stockings can be made in a variety of colours and designs. The different patterns, with directions for working same, may be found in those journals devoted to knitting, but the following is a simple and easy way of making an effective "Turnover" in honeycomb stitch.

Three colours of wool are required for this design, and these can be chosen to suit the wearer's taste. However, for the sake of example, we will suppose the stockings are to be made of dark brown five-ply fingering wool, and the turnover is to be composed of blue and tan wool. The blue should be five-ply fingering and the tan four-ply. Use four steel needles, No. 12. First take the brown wool double to cast on 96 stitches, and arrange these on three needles to knit in rounds.

1st round. With single wool, knit 2, purl 2; repeat the same *twenty-three* times. Then repeat the round *seven* times.

9th round.—Knit plain, with the blue wool.

10th and 11th round.—Purl, with blue wool.

12th round.—Use the tan wool, slip 2 stitches as for purling, then knit 6, and repeat the same *eleven* times. Repeat this round *three* times.

16th round. Knit plain, with blue wool; and be careful to knit the two slipped stitches loosely.

17th and 18th round.—Purl, with blue wool.

19th round.—Use tan wool, knit 4, slip 2 stitches as for purling, knit 6 and repeat same *ten* times. Then slip 2 and knit 2. Repeat this round *three* times.

23rd round.—Knit plain, with blue wool.

24th and 25th round. Purl, with blue wool.

This finishes one honeycomb pattern.

Now start afresh at the 12th round and knit to the end of the 25th round, *three* times. The fancy part of the turnover is now completed. Break off the blue and tan wools, and attach the dark brown with which the stockings are to be made. The next *five* rounds are to be the same as the first. Then knit *two* rounds of purl to mark the fold.

and turn the work outside in on the needles. Repeat the *first* round till the ribbing is the same length as the turnover and then commence the ordinary leg of the stocking.

GLOVES, TO KNIT

For a lady's size, cast on 60 stitches (very loose), with the best Scotch fingering wool, and pins No. 15; have 20 on each needle.

Wrist.—Do 38 rounds, or about 3 inches, of ribbed knitting, 2 plain, 2 purl.

Hand.—Knit 2 plain rounds. Then a round of 1 plain, 1 purl. Keep this pattern throughout the glove; the purled stitches always come in the same line with the purled in previous rounds, and 2 plain rounds to be left between each spotted one.

6th round.—Knit 1, increase by knitting into the lower part of the next stitch, for the thumb; always increase in the same manner, by knitting into the lower part of the stitch as well as into the stitch itself. Purl 1, increase again. Knit and purl for the remainder of the round. Knit 8 rounds as usual, but note that now you have 2 plain stitches coming together in the two places from whence the thumb starts.

15th round.—Knit 1. Increase by purling into the lower part of the next stitch, knit 1, purl 1, knit 1, increase by purling into the lower part of next stitch, knit 1, purl and knit the remainder.

Do 4 more rounds.

20th round.—Knit 1, increase, knit 5, increase, knit the rest.

21st round.—Notice that you knit the 1st and 2nd and the 8th and 9th stitches plain.

22nd round.—Knit 1, increase, knit 7, increase; knit the rest.

25th round.—Knit 1, increase, knit 9, increase.

27th round.—In this one, you have again the 2 plain stitches coming together on each side of thumb.

28th round.—Knit 1, increase, knit 11, increase. Increase in this manner at each side of the thumb, in the 30th, 33rd, 35th, 37th and 40th rounds.

45th round.—Slip the 25 thumb stitches on a piece of wool, and leave

them unknitted; cast on 2 extra stitches at the end of the 3rd and 3 at the beginning of 1st needle; these 5 stitches must all come together at the join of the thumb; this brings the pattern row even. Knit 20 rounds.

Forefinger.—Take 2 more needles into use, and divide your stitches conveniently; take 7 stitches on each side of the extra 5 you had cast on opposite the thumb, which makes 19, and cast on 3 to go between the fingers. You now have 22 altogether. Knit 39 rounds; decrease 4 times in the round; the tips are all plain knitting, and may be done on finer needles if preferred. Do a plain round and decrease 3 times in a round until only 12 are left. Break off the wool, and draw up the stitches with a wool-needle, fastening off firmly on the wrong side. Any holes left where the fingers join, must be sewn up afterwards.

Middle Finger.—Pick up 3 between the fingers, knit 7, cast on 3 to go between this and the ring finger, knit 7. You have 20 in a round. Make this finger a little longer than the other.

Do the fourth finger in the same way, but not quite so long.

Little Finger.—Take the last 15 of the stitches, and raise 3 between the fingers. Knit 33 rounds and decrease.

Thumb.—Make a gusset, by picking up the 5 stitches which you had cast on below the forefinger. Knit 2 together at the end and beginning of them in every alternate round. When the 4 are worked off, decrease at once at the gusset until you have only 22 stitches; you must manage to keep the pattern even. Make the desired length (30 rounds), decrease; join up.

It is unnecessary to make right and left hand gloves; even trying them on almost shapes them.

With rabbit wool, you would cast on less stitches, and stop decreasing at the 37th round, and knit 2 plain rounds, slipping off 22 for the thumb and only working 12 rounds, before the fingers.

MAN'S GLOVE

Knit exactly as in preceding pattern, except that you cast on 38, which gives you 2 more stitches for each finger; make them all half an inch longer, and give 12 extra rounds before dividing

the fingers. Decrease to 24 for the thumb.

CONCLUSION

A very wide choice of articles upon which to expend her skill is offered to the knitter.

Lace, of many beautiful styles and designs, can be knitted, with suitable thread.

A Parting Hint for the Knitter.—Never allow any one else to "do a row for you." Such an offer may often be made in kindness but, if accepted, in nine cases out of ten will prove disastrous. Some workers knit loosely, others more tightly, and this makes an appreciable difference in the appearance of the work.

HOW TO CROCHET

Cotton, thread, wool, or silk, and a crochet-needle, are the materials required for crochet work. The long wooden and bone crochet-needles are used for wool, while for cotton and silk short steel needles screwed into a bone handle are best. The beauty of crochet work largely depends upon the regularity of the stitches; they must be elastic, but if too loose they look as bad as if too tight. The size of the needle must correspond with the quality of cotton or wool used. The work should be done only with the point of the needle; the stitch should never be moved up and down the needle.

All crochet-work patterns are begun on a foundation chain. There are three kinds of foundation chains—the plain, the double, and the purl. The plain foundation consists of chain stitches only.

Plain Foundation Chain.—Form a loop with the cotton or other material with which you work, take it on the needle, and hold the cotton, as for knitting, on the forefinger and other fingers of the left hand. The crochet needle is held in the right hand between the thumb and forefinger, as you hold a pen in writing; hold the end of the cotton of the loop between the thumb and forefinger of the left hand, wind the cotton once round the needle by drawing the needle underneath the cotton from left to right, catch the cotton with the hook of the needle and

draw it as a loop through the loop already on the needle, which is cast off the needle by this means and forms one chain stitch. The drawing of the cotton through the loop is repeated until the foundation chain has acquired sufficient length. When enough chain stitches have been made take the foundation chain between the thumb and forefinger of the left hand, so that these fingers are always close to and under the hook of the needle. Each stitch must be loose enough to allow the needle hook to pass easily through. *All foundation chains are begun with a loop.* (See Needlework Illustrations, Fig. 6.)

Double Foundation Chain.—Crochet two chain stitches, insert the needle downwards into the left side of the first chain stitch, throw the cotton forward, draw it out as a loop, wind the cotton again round the needle and draw it through the two loops on the needle, * draw the cotton as a loop through the left side of the last stitch (see Needlework Illustration, Fig. 7), wind the cotton round the needle, and draw it through both loops on the needle. Repeat from * till the foundation chain is long enough.

Purl Foundation Chain.—Crochet four chain stitches, then one treble stitch—that is, wind the cotton round the needle, insert the needle downwards into the left side of the first of the four chain stitches, wind the cotton round needle, draw it through the stitch, wind the cotton again round the needle and at the same time draw the cotton through the last loop and through the stitch formed by winding the cotton round the needle. Wind the cotton once more round the needle, and draw it through the two remaining loops on the needle. The four chain stitches form a kind of scallop, or purl. (See Needlework Illustration, Fig. 8.)

Slip Stitch.—Draw the needle through the back part of a plain or double foundation chain stitch, or in the course of the work, through the back part of a stitch of the preceding row, wind the cotton round the needle, and draw it through the stitch and loop on the needle. The illustration (Fig. 8), shows a number of slip stitches, the last of which is left quite loose; the

arrow marks the place where the needle is to be inserted for the next stitch.

Double Stitch.—Double stitches are worked nearly like slip stitches. Draw the cotton as a loop through the back part of a stitch, wind the cotton round the needle, and draw it through the two loops on the needle.

The Ribbed Stitch.—This stitch is worked backwards and forwards—that is, the right and wrong sides are worked together, which forms the raised ribs. Insert the needle always into the back part of every stitch. Work one chain stitch at the end of every row, which is not worked, however, in the following row. (See Needlework Illustration, Fig. 11.)

Slanting Stitch.—This stitch is worked like that described in article headed, "Double Stitch." The cotton is not wound round the needle the first time in the usual manner, but the needle is placed in the direction of the arrow (see Needlework Illustration, Fig. 15) above the cotton. Draw the cotton through as a loop; the stitch is finished like the common double stitch.

Cross Stitch.—This stitch is worked like "Slanting Stitch," on a foundation like the "Double Foundation Chain," only insert the needle through the two upper sides of a stitch. (See Needlework Illustration, Fig. 12.)

Long Double Stitch.—For this stitch wind the cotton round the needle, insert it into the back of a stitch, draw the cotton out as a loop, wind the cotton again round the needle, and cast off together the two loops and the loop formed by winding the cotton round the needle.

Treble Stitch.—Treble stitches are worked as has been described for the "Purl Foundation Chain." The treble stitches are worked on a foundation chain, or in the stitches of the preceding row. (See Needlework Illustration, Fig. 13.)

Long Treble Stitch.—These stitches are worked like treble stitches, only the cotton is wound twice round the needle. In "Double Long Treble" the cotton is wound three times round the needle. The loops formed by winding the cotton round the needle are cast off one by one with one of the

loops on the needle. The two loops that remain at the end are cast off together after winding the cotton round the needle.

Open-work Spots (sometimes called "Square Crochet").—These spots are treble stitches divided by two chain; miss two stitches under the latter (See Needlework Illustration, Fig. 14.)

These are all the stitches with which it is necessary for the beginner to make herself acquainted.

DIAGONAL TUFTED CROCHET EDGING

This is a strong edging, suitable for a dozen different purposes, and as it is very quickly worked and a particularly easy pattern to join, the directions for making it may be useful to readers of this article.

Cotton of a medium size is most satisfactory for this edging, such as No. 12, with a hook No. 18.

1st row.—Make 18 chain stitches and work a row of double crochet upon them.

2nd row.—1 chain, 16 double crochet, and 2 double crochet into the last stitch.

3rd row.—2 chain, 1 double crochet in the first chain, 14 double crochet into the next fourteen chain, make 5 treble in the upper thread of the fourteenth double crochet of the 1st row, 3 double crochet in the next three stitches.

4th row.—1 chain, 3 double crochet, 2 double crochet, worked off together into the first and fifth treble, thus drawing them together into a "tuft," then 3 double crochet, 4 chain, * miss two, 1 treble, 2 chain; repeat three times from * and finish with 1 long treble in the same stitch as the last treble.

5th row.—2 chain, 1 double crochet in the first chain, 16 double crochet. Repeat from the 2nd row.

For the edge, work as follows:—

* 1 double crochet in the edge of the first rib, 5 chain, then 4 double crochet with 5 chain between each in the point, 5 chain, 1 double crochet in the stitch over the next tuft, 2 chain. Repeat from *.

EFFECTIVE ARTICLES FOR CROCHET WORKING

The following selection of articles for crochet working may offer some helpful suggestion to the reader.

Neckband and cuffs.

Collar-band, with plastroon attached.

Camisole yoke.

Chemise top.

Crochet initials, for marking house-linen, etc.

Fascinator, or "Theatre" wrap, for the head.

Girdle.

Medallions, for blouse trimming, etc.

Most knitted articles are made equally well in crochet. A combination of crochet with embroidery is very charming work.

When the worker becomes sufficiently expert to crochet with a very fine needle and fine cotton, she can imitate with great fidelity most of the beautiful old laces, such as Brussels, Point, Honiton, etc.

As in knitting, some workers crochet loosely, others tightly. Crochet that is done too loosely is perhaps even uglier than that in which the loops are too tightly drawn. There is a happy medium which the clever worker knows how to command.

MACRAMÉ LACE

Macramé lace is made simply of an arrangement of knots, all of which are founded upon button-hole stitch grouped in various ways, and made with the strands themselves without the help of any needle. The lace is extremely strong, but it is its very hardness and firmness that render it unfit for many of the purposes for which other kinds of lace are used. Much, however, depends upon the nature of the threads of which it is made. For hand-bags, bracket and mantel-borders, and trimming for furniture, a good make of twine, in any artistic colour, is most suitable.

If crochet cotton, or flax thread, is employed, the lace is very appropriate for trimming linen blinds. Fringes for dress trimmings should always be made in silk. Linen thread can be knotted into beautiful fringes for trimming towels, pillow-cases, sideboard

cloths, tea-cloths, and many other linen articles.

The coarser threads are better to practise the knots with, but, once these are known, the worker will easily be able to manage the finer strands.

Articles for Making Macramé Lace.—

The lace is made on a board or loom, or on a heavy cushion. A loom can be bought, made for the purpose, and provided with screws for tightening the threads and a support by which it can be placed at a convenient slope on the table. If a cushion is preferred the worker can easily make one for herself. It should be filled as tightly as possible with a mixture of bran and sand, the latter giving the necessary weight. The outside cover should be made of ticking or some similar striped material, which is necessary in order to get the lines of the lace exactly straight and the same distance apart.

The next requisite is a box of Macramé pins. These are sharp steel pins about an inch and a half long, having gaily coloured glass heads. The other necessities are [such as every worker has at hand, and include scissors, a yard measure, and one or two strong ordinary pins.

To make Foundation.—The first thing to be done is to cut a piece of twine the length of the lace that is to be made. This must be folded in half and pinned down to the left-hand side of the cushion; it is then carried across the cushion upon one of the stripes of the cover, and is firmly pinned down at the other side. The rest of this length of twine should be folded up and fastened to the side of the cushion out of the way. Two of these foundations are necessary to begin with, others being added as the pattern of the lace requires them, and the next thing to do is to learn to put on the strands with which the various knots are made.

The length of twine to cut for each strand is always more or less of a puzzle to a beginner. Most patterns give the necessary measurements, but these are subject to variation according to the coarseness of the threads used for the work. The only way to solve the mystery is to cut the strands for

the first vandyke of the lace into what appears a sufficient length, and to be guided by what remains when all the knotting is done, in cutting the others. Each string is cut the length required, folded in half, and the loop pushed downwards under the foundation; the two ends are then brought over the foundation and through the loop, and are pulled up tightly.

The Cord and Macramé Knot.—To make what is known as the Cord, take the first strand, pass it first over the foundation, then under it towards the left hand and through the loop made by itself, draw it up firmly and make another similar loop, which must set quite close to the first. The double knot then made is called a Macramé knot. By a half Macramé knot is meant the first half of these stitches. See Needlework Illustration, Fig. 16.)

Single and Double Chain.—Single chain is made with two threads thus: With the right hand work a half Macramé knot over the first strand, holding this out taut, then with the left hand work a similar knot on the second strand. Continue making these knots alternately till the bar is long enough. *Double chain* is made in exactly the same way, but with two strands instead of one.

Button-hole Knot.—To make this, hold out strand 1, and with 2 make Macramé knots upon it until the bar is the right length.

Tatted Knot.—To work this, make the first half of a Macramé knot with 1 upon 2, then pass the strand under, then back over the foundation and under itself. Draw up tightly.

The Twisted Bar.—The Twisted Bar needs four strands. Hold out 2 and 3 as leaders, * cross 1 over 2 and 3 and under 4, and pass 4 under 2 and 3 and up through the loop made by 1, then take hold of both strands and draw up the knot. The twisted appearance will be gained as the knots are made.

Solomon's Knot and Double Knot.—The Solomon's Knot is one of the most effective and requires four strands. Fasten down 2 and 3, take 1 across them and under 4, as in making the Twisted Bar, then pass 4 under 2 and 3 and up through the loop made by 1, draw up tightly, holding both ends so

that they pull equally. Take 4 over 2 and 3 and under 1, and pass 1 under 2 and 3 and up through the loop made by 4; then complete the knot by repeating the first tie. A true Solomon's Knot is made up of these three ties, though many workers use two only, and so make what is really a *Double Knot*.

The Josephine Knot.—This is an exceedingly pretty tie. Take strand 1 and make a loop by bringing the end over the upper part, pass strand 2 under the loop over the end of 1, under the upper part, over the upper end of the first loop, then under itself and over the lower part of the first loop, and draw up evenly.

The Diamond Pattern.—This pattern, in some form or other, is found in almost every piece of Macramé lace or insertion. After the cord has been made, take twelve strands and consider them as numbered from left to right. Take 6 in the left hand and hold it in a slanting direction over the first five strands. This strand is known as the Leader. Take 5 in the right hand and work over the Leader a Macramé knot, then take 4, 3, 2, and 1, and work a knot with each in turn, still holding down the Leader. When all are done pin down the Leader, take strand 5, hold it close to the first Leader, and with 4, 3, 2, and 1 make a knot upon this second Leader, finishing the bar by making a knot with the first Leader on the second one; then take strand 4 as Leader and work in the same way. In good work these three Leaders will set firmly and compactly one against the other, no loose thread being visible between them. This completes a quarter of the star, as shown in the illustration (Fig. 17). The second half is made in exactly the same way, but in the opposite direction, strand 7 serving as the first Leader, and being sloped from left to right downwards. Pin down these sections of the star firmly, then to complete the first section, take the last Leader again, hold it so that it slants downwards from left to right, and make knots on it with the other strands in succession, then continue as before with the remaining six strands, taking the twelfth strand as Leader.

New Strands.—Should any particular strand be used up too soon the fresh strand should always be passed on to one of the Leaders, simply by folding it in half and passing the Leader through the loop. One end of the strand will be above, the other under the Leader. Take the former in the finger and thumb to steady it and work a *half-Macramé* knot on the Leader with the latter. Should one extra strand only be needed, one end should be arranged to be longer than the other, the shorter one being sewn down at the back with a needle and thread and cut away when the work is taken off the board, or cushion.

The Star Pattern.—This is worked in the same way as the Diamond, the difference in the effect being gained by slanting the sections so that they meet in the middle, where is made a Raised, or Genoese Knot. To work this, take the four middle strands of the twelve, hold the middle two of these out as Leaders. Take 1 in the left hand, and with the right pass 4 over 2 and 3, under 1, over 1, under 2 and 3, and up through the loop made by itself; draw it up, but not very firmly. Repeat about eight times. Get a medium sized bone knitting-needle, place it across the bar, take the four strands, curl the knot over the knitting-needle above the star and pass the four ends into the hole between the three cords, bring them down and out under the knitting-needle and tie tightly, then take out the needle and continue the star. Another raised centre is made by working a flat bar of Solomon's Knots. To shape this, thread the first and fourth strands each to a carpet needle and pass each needle through a wee hole that will be found exactly at the top of the bar. Pass the two middle strands through the large hole between the sections of the star, draw them all down and continue the work as before.

Having mastered the different "ties" described in this article, the worker should be sufficiently skilful to make an easy lace.

EMBROIDERY STITCHES

By the term Embroidery is meant the working in silks, wools, or cottons,

upon a more or less elaborate ground. In that particular kind of embroidery called "*Broderie Anglaise*" the stitches used are the same, with one exception, as those used in general embroidery. The one exception is the open stitch, which is seldom if ever used in embroidery on such materials as silk, satin, velvet, or cloth. This open stitch is commonly known as the "*Eyelet-hole* Stitch."

In working embroidery with cotton on linen, muslin, cambric, etc., the following rules must be observed.

The size of the thread and needle must correspond to that of the material on which you embroider; the needle must not be too long, and the cotton must be soft. Skilful embroiderers never work over anything, because when you tack the material on paper, or cloth, each stitch shows, and if the material is very fine, leaves small holes. But it is advisable for a beginner to tack the material to be embroidered upon a piece of suitable paper. If, however, you work without this, place the material straight over the forefinger of the left hand; *the material must never be held slantways*. The three other fingers of the left hand hold the work while the thumb remains free to give the right position to each stitch. The work should always, if possible, lie so that the outline of the pattern is turned towards the person who works.

The following are a few of the principal stitches used in "*Broderie Anglaise*."

A Scallop.—In order to prepare a Scallop take thicker cotton than that you would use for other stitches. Never commence with a knot, and do not take a thread longer than sixteen or eighteen inches. The outlines of the Scallops are first traced with short straight stitches. In the corners particularly the stitches must be short. The space between the outlines is filled with chain stitches, they must not be too long, otherwise the embroidery will look coarse. It is in this way that every pattern to be worked in button-hole or satin stitch is to be prepared.

Overcast Stitch.—The double overcast and the button-hole stitches are

worked from left to right, whilst back stitches, knotted, and satin stitches are worked from right to left. In order to work the overcast stitch first trace the outline; fasten the cotton with a few stitches, hold it with the thumb of the left hand under the outline, insert the needle downwards above the outline, draw it out under the same and below the cotton with which you work, and which you keep down with thumb of the left hand. Care must be taken that the stitches are regular and lie close to one another, also that the material is not puckered.

Back Stitch.—The working of this stitch is well-known. It is worked in several rows close to each other.

Knotted Stitch.—The simplest way of working this stitch is to work two back stitches at short distance from each other over the same thread. Another way of working a knotted stitch is to take about four threads of the material on the needle, draw the needle half out, wind the cotton twice round the point of the needle, hold it tight with the thumb, draw the needle out carefully and insert it at the next place where the stitch was begun, then draw it out at the place where the next stitch is to be worked.

Raised Satin Stitch.—This stitch is chiefly used for flowers, leaves, letters, etc. After having traced the outlines of the pattern, fill the space left between them with chain stitches in a direction different from that in which the pattern is to be embroidered; begin at the point of the leaf, working from right to left, make short straight stitches, always inserting the needle close above the outline, and drawing it out below. The leaves on the flowers, as well as on the branches, must be begun from the point, because they thus acquire a better shape. If you wish to work a leaf divided in the middle, you must trace the veining before filling in with chain stitches, then begin at one point of the leaf and work first one half and then the other.

The outline stitch so much used in embroidery garbents is simply overcast stitch.

Drawn-Thread Work.—This work, as its name implies, is a style of embroidery in which the pattern is worked

by entirely drawing out some of the threads of the material (usually linen) and working various stitches upon the remaining threads.

SMOCKING

The beauty of smocking depends entirely upon the evenness and regularity of the gathering, so that the utmost care must be taken to keep the lines of gathering threads perfectly straight, and the stitches at equal distances one from the other. As it is almost an impossibility to do this without a guide of some sort, transfer sheets, printed for the purpose, can be bought. These have small dots upon them at regular intervals, and only require ironing on the material in the same way as the designs for crewel work. The dots then become apparent and the gathering can be done from one to the other. In order to begin the gathering insert the needle in the top right-hand dot, bring the point out half-way between this and the second dot on the same line, then in through the second dot and out half-way between this and the third, and so on for the whole length of gathering. The second, and all following rows of gathering, should be done in exactly the same way. When all are gathered, draw up the threads and keep the gathering in place by winding the cotton round pins put in material. It is always best to do all marking and gathering upon the wrong side of the material.

If desired beginners can make their own guide, instead of buying the transfer sheets. To do this a long strip of ordinary stout cardboard, about six inches in width, is required. Spaces, measuring half an inch apart along one edge, and three-eighths of an inch apart along the other, should be marked along each edge of the cardboard with a pen or pencil, thus 1, 1, 1. Having placed the half-inch edge of cardboard uppermost on the wrong side of the material, tick each mark. Then remove cardboard and place it as much lower down on material as the length of the smocking is to be and tick more marks *exactly below* the first. To ensure perfect evenness it is as well to measure from margin of

THE NEEDLEWOMAN

stuff. The next thing to be done is to draw lines, with a ruler, from one tick to the other, using a blacklead pencil for light material and a coloured for dark. The lines now traced are to show the *width* of the stitches, and in order to form the *gathering* lines the three-eighth inch edge of cardboard must be made use of. With this you tick as many lines as are required for length of smocking, both on right and left-hand side of material. Then draw lines from each of these marks to the opposite one. The result will be a series of oblong squares, such as are used for working the ordinary Honeycomb Pattern.

Different patterns require different tracings, sometimes the spacing being perfectly square, as for Diamond Pattern.

The gathering should be commenced on the top line, the needle being inserted on the right-hand side where the lines cross one another. Bring the point of needle out half-way between the first and second perpendicular lines, then insert again at the crossing of the next lines, and so on till end of line. Finish off in the way already explained. It is necessary to make certain of the number of rows and gathers required to form a pattern so that the material can be marked accordingly.

All gathering threads are pulled out when the work is completed.

HONEYCOMB PATTERN

This consists of hollow cells caught together at the four angles by stitching. When the gathering is arranged and drawn up in the manner already described, hold the material right side towards you, and having your needle threaded with silk, insert it from the back to the front at the left-hand top corner in the first pleat, and exactly over the gathering thread. Join the next pleat to this by a stitch taken from right to left, through each, another stitch through both pleats, then insert the needle in the same spot, but in the second pleat only in order to bring it out in the same pleat but over the second gathering thread. Attach the third pleat to this by a stitch through each, then another through both. Insert the needle in the same

spot, but in third pleat only, to bring it out in same pleat over first gathering thread. Continue in this way, working a stitch alternately in each row. When you go from one row of gathering to the next always slip the needle *up and down*, never *across*.

NETTING, OR KNOTTING

In this form of work exactly the same stitch is used either to make a fine mitten or a strong hammock.

The implements required are a netting needle and mesh. These are made of steel, wood, bone, or ivory. The first-named is used for silk or cotton, the three latter for wool.

The needle is filled by passing the end of the thread through the little hole at the left-hand point, and tying it; then the thread is wound on the needle as on a shuttle. The meshes correspond to the sizes of the needles and are made of the same materials. The larger the size of the stitch required, the thicker the mesh must be selected. A stirrup to slip over the foot on which the foundation is attached is required by those who do not use a netting cushion, placed before them on the table and heavily weighted; to this the foundation is fastened. The stirrup is made of a loop of ribbon, to which the foundation is tied.

In netting, the mesh is placed under the thread, between the finger and thumb of the left hand. The work should rest on the middle of the finger and be held only by the thumb. The needle is taken in the right hand, the thread is passed over the middle and third fingers and over the mesh, then upwards and behind the mesh into the large loop which is formed by the thread round the fingers and at the same time through the first stitch, or loop, of the foundation. The needle is then drawn out, the loops being retained on the fingers and dropped off one by one, the little finger being the last to release the thread. As the thread tightens the loop on the little finger should be drawn up quickly and sharply, thus making the knot firm. This completes one loop or stitch, and the rest are precisely similar.

LACE MAKING

Point Lace.—Having secured a good design for the lace to be made, the next point to be carefully attended to is the placing of the braid. As this should lie perfectly flat, and yet must follow the principal outlines of the pattern, its placing is not exactly a simple matter, though it becomes so after a certain amount of practice. On the inner edge of a curve, the braid has to be carefully drawn, or gathered in, and it is well on this account to avoid sharp curves or angles, especially when one is in the novice stage of lace-making.

The thread used in lace-making is of a peculiar texture and has none of the harshness of cotton about it, being much softer in effect.

The stitches used in the making of point lace are over one hundred in number and besides these there are connecting bars, finishing edges, wheels, and rosettes to be learned. However, very beautiful work can be done with a comparatively small number of stitches. The following are those more generally used.

Brussels Stitch.—This is a kind of loose button-hole stitch, and its beauty consists in the regularity with which it is worked. For the sake of clearness our illustration (Figs. 18 and 19) represents the stitch as being larger than it should be, as the thread should be drawn up so close to the braid, or beading, as to leave only room for the next stitch to be inserted. This stitch is occasionally used for edgings, but is oftener employed to fill up the centre of a leaf or flower. Brussels stitch is the foundation of nearly all lace stitches.

Box Stitch.—Box stitch is worked by inserting the needle in the edge of the braid, keeping the thread to the right, and bringing it out inside the loop formed by itself. There are many varieties of this useful and beautiful stitch. "Close" and "Treble" are among these, the first consisting in working the twisted stitch into every pinhole of the braid or beading. The latter consists of three close stitches and one open, alternately, on the second row, the open stitch coming under the three close, and vice versa, producing an effect

frequently seen with treble stitch in crochet.

Valenciennes Stitch.—This stitch appears complicated, but is quite simple really. Begin at the left hand and work six Brussels stitches at unequal distances, every alternate stitch being larger. Second row: Upon the first large or long stitch work nine close buttonhole stitches, then one short Brussels stitch under the one above, then nine close stitches; and so on to the end of row (right to left). Third row: Five close buttonhole in the nine of previous row, one short Brussels, two close in the Brussels stitch, one short Brussels, five close, one short, also Brussels, then two close, one short, five close, one short, all Brussels. Repeat.

Fourth row: Five close, one short Brussels, two close, one short, five close, one short, two close, one short, and again repeat. Continue the rows until sufficient of the pattern is worked.

Wheels and Rosettes.—Wheels and rosettes are used in point lace to fill up spaces. The English wheel is formed by inserting the needle under each bar, and bringing it out again between the thread and the last stitch, thus producing a kind of buttonhole stitch.

After having carefully learned and practised these stitches, and as many more as she can imitate from old, or other lace, the worker should select a very simple pattern to begin upon. The width of the braid, or beading, must be selected in proportion to the width of the lace as well as the character of the design. All the bars which form the foundation for fancy stitches, wheels, and rosettes, should be put in before any of the finer stitches are begun. The braid and bars form the skeleton, or sketch, on which the worker has to exercise her imagination for the filling in, and it is as well to get the foundation of fact complete at all points before fancy begins her play. Seventeen inches of braid are sufficient to allow for the beading of eighteen inches of lace, as the lace shrinks in working. This is the reason the beading is not put on till last, and the bars which join it to the lace form an exception to the rule which fills in all the bars before the stitches are begun.

PETS

DOGS

Dogs' Food.—The food should be particularly attended to. Raw meat is not fit for purely house dogs. Sheep's head boiled is good for puppies, and when stewed small and mixed with rice will be found excellent. For the grown animal a variety is good, as he will enjoy a change of diet as much as anybody in the house.

Meat, when allowed, cannot be of too coarse a quality; the shin or the cheek of the ox being preferable to the ribs or buttocks. It should be lean. Paunch is excellent meat for dogs, and to aristocratic animals it may be given in the form of tripe. Never allow your dog to eat what is commonly known as "cats'-meat."

Bullock's liver is good for dogs, not as the staple of its food, as it is laxative, but say once or twice a week, when its medicinal properties will be beneficial; besides that, it will break the monotony of "paunch for dinner." It is much more laxative in a raw than a boiled state. It will be well to bear in mind that raw meat is more stimulative than cooked meat; consequently, for idle dogs the latter is preferable. "Give dogs as much porridge and as little meat as they will take; if ill, double the quantity of meat."

Breakfast should be light—two biscuits and the important butter-milk which Dr. Stables says is invaluable. There is nothing like it. Oatmeal porridge is good for dogs; so is ship-biscuit. Rice is excellent, besides being very cheap. A pound of shin of beef boiled, and the broth saved, and a pound of rice well-boiled the next day in the broth, will serve a hearty dog nearly a week. Persons

having lap-dogs will find that rice, properly seasoned or soaked in gravy is less likely to render them gross, and their bodies odorous, than dining them daily from the family joint. Never give a dog warm meat; sooner or later it will certainly enfeeble digestion. Be regular in giving dogs their meals.

For dogs that are ill, food should be prepared with extreme care. Sickness cannot be relieved without trouble, and in many cases an animal requires as much attention as a child. Nothing smoked or burnt, no refuse or tainted flesh, must on any account be made use of. The meat may be coarse, but it should be fresh and wholesome. Dirty saucepans or dishes ought not to be employed. Beef-tea is one of the articles which, in extreme cases, is of great service.

To prepare the beef-tea, take half a pound of beef, cut from the neck or round is better than any other part, but it does not matter how coarse the quality may be. Divest the beef of every particle of skin and fat, and mince it as fine as sausage-meat. Put it into a clean saucepan, with a pint of water, and stand it on the hob at such a distance from the fire that it will be half an hour before it boils. Let it boil ten minutes; set it aside to cool; skim off what fat there may be on the surface, and, without the addition of salt or any kind of seasoning, the beef-tea is ready for your canine patients. However, we will say no more of sick dogs at present.

The dog should be fed *once* a day, and his food need not be given on a plate. Throw him his meat on the floor—not on to a paved or plank floor, but on the earth. The quantity of the latter he will swallow with his meat will not hurt him; on the contrary, it

will stimulate his intestines. Feed him *regularly*.

As to the quantity of food with which a dog should be supplied, it is impossible to direct, as no two dogs eat alike. The owner of a dog, however, may easily ascertain the wholesome limit of his dog's appetite. Set before him in a corner, where he will not be disturbed, an ample allowance, or more, and, unobserved, keep your eye on him. If he be in health, he will set to, and not abate his industry till he feels comfortably full; then he will raise his head, and move away from the remnants. Marking this, and to save him eating to repletion, as he certainly will, if allowed, you will remove what is left, and so learn what should be his regular allowance.

A large, hard bone thrown to the dog very frequently will be useful to him; not for the sake of what he may pick off it—indeed, the less there is on it the better—but to keep his teeth in order.

Some general remarks as to feeding dogs may be added. For instance, sporting dogs have meat mixed with vegetables or oatmeal, with meat twice a week only, but vegetables should be sparingly used when the dogs are at work daily, as such diet is laxative.

In all cases flesh for dogs should be well boiled, and not served to them hot at any time. Some people always give dogs their food quite cold. Remember variety is charming. Hounds in the hunting season may have some sulphur mixed with their food once a week. Greyhounds may be generally fed upon animal food, boiled or stewed, twice a day, and always in moderation.

General Treatment of Dogs.—Damp is very injurious to dogs, and kennels should be warm and dry, placed in non-exposed situations, and raised from the ground. The bed should be particularly clean.

Pet dogs require considerable care. The sleeping places should be warm and comfortable, and the pet should never be permitted to eat too much, nor forced if disinclined. More illness arises from over-feeding than from other causes. The snoring of dogs also proceeds from this cause.

Do not, however, chain any dog up in a place where he cannot get shade from the sun. Do not leave him dirty water, or water that has been long in the heat of the sun. Feed your dog in the morning if you wish him to be watchful at night, for if fed late the dog will remain quiescent during the progress of digestion. Always unchain your dog for a run every day, and after meals. House dogs should be *regularly* turned out, and if they transgress the rules of cleanliness, should be taken to the spot and scolded and *gently* beaten. They will not offend again. Raw meat should on no account be given to dogs kept in the house, as it makes them offensive, and it is also apt to make them savage.

Concerning "scraps," a lately-quoted authority has something instructive to communicate on this point. "However strict may be the orders, and however sincere may be the disposition to observe them, scraps will fall. Bits *will* be thrown down. Dishes will be placed on the ground; and sometimes affection will venture to offer 'just a little piece,' which no one could call feeding. It is astonishing how much will in this way be picked up, for the dog that lies most before the kitchen fire is generally the fattest, laziest, and at feeding-time the best-behaved of the company. Consequently, no dog should be allowed to enter the kitchen, for their arts in working upon mortal frailty can only be met by insisting on their absence. The dog that is well fed and not crammed should not refuse bread when it is offered. If this be rejected, while sugar is snapped eagerly, it will be pretty certain either that the animal is too much indulged, or that its health requires attention."

Cleanliness is essential to the well-being of dogs. The kennel ought to be washed once a fortnight at least, and done over with turpentine. The straw should be changed at the same time, or oftener in wet weather. Wash the yard well by douching with water, and carbolic acid may be used as a disinfectant if necessary. A wooden bench is recommended for dogs to lie on outside the kennel, which ought to be made so as to open or close up at

night, according to the weather. Good housing and feeding, cleanliness, plenty of exercise, will always keep the dog's coat in good order.

Dogs will but seldom require washing if properly treated. Frequent washing, especially where soap, soda, etc., are used, renders the hair harsh and rough, and much more liable to catch the dirt than the hair of the dog treated as a rule by the dry process. All that is required is a comb with a fine and a coarse end, and a stiff brush. It should be combed and brushed regularly every morning, and if it is allowed to get its coat muddled, the mud should stay on till it is quite dry, when it may be dusted and brushed out without leaving a stain.

An *occasional* wash will be beneficial, but in the coldest weather the chill only should be taken off the water, and the yolk of an egg used instead of soap. As useful a lather as soap lather is produced, it does not burn the animal's skin, and if he wishes to "plume" himself, after his nature, he will not be made ill. A small dog, say a Skye terrier, will not require more than the yolk of a single egg.

Never use lukewarm or warm water in dog-washing; nothing is more debilitating to the system. The animal will feel faint and weak, and not at all disposed to frisk about after his immersion. It is utterly impossible thoroughly to dry the coat of a long-haired dog, and violent cold is the result.

A cold bath, which is of course altogether different from a cold *wash*, will not hurt a robust dog even if it be practised every morning. Do not allow the dog's *head* to be plunged under water; it does no sort of good, and inflicts on it a certain amount of pain. Even if it be a stupid dog, and unable to keep its head above water, a very little assistance from you, applied to the nape of the neck, will effect the purpose. With the other hand the dog's coat should be stirred and roughed so that it be thoroughly saturated.

It is almost useless to try to dry the animal by means of the towel; dried, however, he must be, and that by his own bodily exertion. In all probability he will be much more inclined to skulk by the kitchen fire than to

scamper about, in which case you must rouse him, and either take or send him out for a run.

For the destruction of fleas a well-known authority directs as follows: "The dog must be taken from the place where it has been accustomed to sleep. The bed must be entirely removed and the kennel sluiced—not merely washed—with boiling water, after which it should be painted with spirits of turpentine. The dog itself ought to be washed with eggs and water, with a teaspoonful of turpentine to each egg-yolk. After this the animal should have yellow-deal shavings to sleep on, and if they are frequently renewed the annoyance will seldom be again complained of. As, however, exceptional cases will always start up, should the tribe not be entirely dispersed, the washing must be repeated, or if from want of time or other cause it be inconvenient to repeat the operation, a little powdered camphor rubbed into the coat will abate and often eradicate the nuisance."

Dog Breeding and Puppies.—Sixty-three days is the period of gestation in the dog; and as the lady-dog is rather fastidious respecting her offspring, a nice warm place should be prepared for her. But be careful that she be not exercised too much; no violent exercise is permissible before the anticipated event takes place. For some days previous to the birth of the pups, some boiled sheep's-head, carrots, and milk will be of use and assistance. Be sure that she is not worried or intruded on, except when it is necessary to call in proper assistance. Food must not be forced upon her, and she may safely be left alone. Mind that she has water and air, but no draught.

As to the management of the puppies, it should be laid down as a rule that all handling is injurious. You may feel tempted to do so, but you will probably hurt the puppies, and annoy the mother, or at least cause her great anxiety. After they are four or five days old, the pups may be taken out and their dew-claws cut; and then those you do not require may be taken away from their mother; or a foster-mother may be procured if the children are too many for her.

Be careful that excessive fondness for her progeny does not so far lead her to neglect exercise as to injure her health. No doubt she will, on the day following the birth of her family, be very loth to respond to your whistle, and would much rather stay at home and cuddle her babies than go a-walking. In this, however—always assuming her to be a healthy animal—she must not be indulged. Take her a short walk, say of a mile's length, and then let her return to her family. Afterwards, she may be expected to get about pretty much as usual.

Some she-dogs are averse to suckling the pups they give birth to; others will, as is the case with cats, rabbits, and other animals, eat them as soon as they come into the world. Both sorts of dogs are, of course, objectionable. The dog that evinces no inclination to give suck to her pups, is, in all probability, physically incapable of performing that necessary function, and will remain so, to the expense and perplexity of her owner, as long as she lives; but the disposition to cannibalism is not likely to be a fixed propensity.

As no satisfactory cause for the apparently unnatural act has yet been assigned, one cannot be wrong in choosing to ascribe it to benevolent rather than to malicious motives. One thing is certain, that the animal may eat her pups once, and never, in the whole course of her life, repeat the eccentricity. Indeed, it has been remarked that such dogs are generally among the most affectionate and well disposed.

The mother of the pups must be carefully fed. Healthy pups will, after the first few days, add at least an ounce daily to their weight; and in cases where the unlucky mother has five or six youngsters, it may be easily imagined that the drain on her system must be enormous—five ounces of puppy flesh and bone to be realized from her teats! At the same time, it must of course be borne in mind that *discrimination* as regards feeding must be observed as scrupulously now as at any other time.

If for any reason the pups have to be raised by hand, feed them on milk sop, and at the end of a month they will

be sufficiently established in life to be equal, in a certain degree, to the business of self-feeding. Their tender mouths, however, must not at first be too severely tasked. A mixture of finely-shredded meat, mixed with soaked ship-biscuit or boiled rice, is as good food as any.

The feeding of mother and puppies is a matter of very great importance. Food should be nourishing, light, and cleanly prepared. Milk-and-water may be given warm to pups when they begin to lap at about three weeks old. A little cod-liver oil will improve their appearance after they are five weeks old. By the time they are six weeks old they should be removed from their mother, as they will gain nothing, and indeed they will rather lose by remaining longer under her nursing. Light, wholesome food six or eight times a day is not too often at first. Any non-stimulating food will do, bread-and-milk, boiled rice-and-milk, oatmeal porridge and milk, boiled biscuits and sheep's head broth with an allowance of the meat. Never restrain puppies; keep them clean and make them happy as possible.

Dogs' Diseases.—

FITS.—When out with a dog which has a fit, secure the animal and prevent it running away when the fit is over. Get the dog home with all speed.

Arrived home, should the fit continue, send at once for a veterinary surgeon, as any medicine you can administer will be useless, or worse, because the animal being unconscious cannot swallow, and you may chance to suffocate the creature for whose welfare you are so solicitous. Should the fit be got over, take care that the dog's bowels are in good working order, and keep it cool and quiet for a day or two on a low diet.

INDIGESTION.—From this malady arises the majority of the complaints that afflict dog-kind. All kinds of skin diseases are bred therefrom, and inflammation of the gums, foul teeth, and pestilential breath, are produced from it. It is the origin of asthma, excessive fat, cough, and endless other ailments.

Luckily the symptoms are not very obscure. "A dislike for wholesome food, and a craving for hotly-spiced or highly-sweetened diet is an indication. Thirst and sickness are more marked. A love for eating string, wood, thread, and paper denotes the fact, and is strongly put down to the prompting of a more mischievous instinct; any want of natural appetite, or any evidence of morbid desire in the case of food, declares the stomach to be disordered. The dog that, when offered a piece of bread, smells it with a sleepy eye, and, without taking it, licks the fingers that present it, has impaired digestion.

"Such an animal will perhaps only take the morsel when it is about to be withdrawn, and having got it, does not swallow it, but places it on the ground and stands over it with an air of peevish disgust. A healthy dog is always decided. It will often take that which it cannot eat, but having done so, it either throws the needless possession away, or lies down, and with a determined air watches the property. There is no vexation in its looks, no captiousness in its manner. It eats with decision, and there is purpose in what it does. The reverse is the case with dogs suffering from indigestion."

The best mode of treatment is to diet the animal on sound and plain food, taking care that moderation is observed. If he has been in the habit of eating at any and every hour in the day, divide his daily portion into three, and for the first two or three days give him a meal morning, noon and night. After that his allowance may be cut in two, and only two daily meals given—one at noon and the other before he retires to rest at night. Dog-fanciers generally agree that a dog should be fed but *once* a day.

While thus dieted the animal should have unlimited exercise in the shape of running or walking. A cold bath, of the sort described elsewhere in this article, is good for a dog suffering from indigestion, as well as tonic sedatives and vegetable bitters.

As an ordinary stomach-pill for the dog, the following compound is recommended:—Extract of hyoscyamus, sixteen grains sodæ carb., half an ounce;

extract of gentian, half an ounce; ferri carb., half an ounce. To be made into eight, sixteen, or twenty-two pills, according to the size of the indisposed animal, and two to be given daily.

With very old dogs indigestion is accompanied by alarming appearances. The stomach becomes inflated to a degree almost incredible. As the digestive organs are worn out a cure in such a case cannot be expected, still relief may be given. Liquid, but strengthening food, such as beef-tea, should be given. A weak solution of chloride of lime, or the liquid potassæ is as good a medicine as any. You had better, however, before administering it, let a veterinary surgeon see the dog, that he may instruct you as to the strength and quantity of medicine to be given at a dose.

How to GIVE PHYSIC.—It may be as well here to give some instruction as to the proper way to give physic to a dog.

There are several ways of managing, but the best of any are those recommended by Mr. E. Mayhew.

"A small dog should be taken into the lap, the person who is to give the physic being seated. If the animal has learnt to fight with its claws, an assistant must kneel by the side of the chair and tightly hold them when the dog has been cast upon his back. The left hand is then made to grasp the skull, the thumb and forefinger being pressed against the cheeks, so as to force them between the posterior molar teeth. A firm hold of the head will thus be obtained, and the jaws are prevented from being closed by the pain which every effort to shut the mouth produces.

"No time should be lost, but the pill ought to be dropped as far as possible into the mouth, and, with the finger of the right hand, it ought to be pushed the entire length down the throat. This will not inconvenience the dog. The epiglottis is of such a size that the finger does not excite a desire to vomit; and the pharynx and œsophagus are so lax that the passage presents no obstruction.

"When the finger is withdrawn the jaws ought to be clapped together, and the attention of the creature

diverted. The tongue being protruded to lick the nose and lips will certify that the substance has been swallowed, and after a caress or two the dog may be released. Large brutes, however, are not thus easily mastered. Creatures of this description must be cheated, and they fortunately are not as naturally suspicious as those of a smaller kind.

"The dog bolts its food, and unless the piece is of unusual size, it is rarely masticated. The more tempting the morsel the more easily is it gorged: and a bit of juicy or fat meat, cut so as to contain or cover the pill, ensures its being swallowed. Medicine which in this manner is to be administered ought to be perfectly devoid of smell, or for a certainty the trick will be discovered. Indeed, there are but few drugs possessed of odour which can be long used in dog practice, and even those that are endowed with much taste cannot be continually employed.

"Fluids are more readily given than solids to dogs. To administer liquids the jaws should not be forced open and the bottle emptied into the mouth, as when this method is pursued the greater portion will be lost. The animal's head being gently raised, the corner of the mouth should be drawn aside so as to pull the cheeks from the teeth. A kind of funnel will thus be formed, and into this a quantity of medicine equal to its capacity should be poured. After a little while the fluid will, by its own gravity, trickle into the pharynx and oblige the dog, however unwilling it may be, to swallow. A second portion should then be given in the like way, and thus little by little the full dose is consumed. Often dogs treated in this fashion swallow a draught very expeditiously; but others will remain a considerable time before they deglutate. Some, in spite of every precaution, will manage to reject the greater part, while others will not waste a drop."

TO MAKE A DOG SWALLOW.—"Two pieces of tape, one passed behind the canine teeth of the upper, and the other in like manner upon the lower jaw, have been recommended. The tapes are given to an assistant, who

pulling on them forces the mouth open and holds it in that position. In certain cases this may be adopted for pills; indeed, every stratagem will be needed to meet the multifarious circumstances that will arise. For ordinary circumstances, however, the practice is not to be commended, and should never be embraced when drinks are to be given: the animal cannot swallow while the jaws are held asunder: but for solids the plan answers better.

"There are several objections, however, to be urged against its constant use. The operation is violent, and the restraint it necessitates not alone prevents the poor animal deglutating fluids, but also terrifies it, and on the next occasion it will be more resistful. Difficulties therefore increase, and the dog generally is not long before it baffles the efforts to confine it. Moreover, unless the assistant be very well up to his business his steadiness cannot be depended on, and the hand often is wounded by the teeth of the patient."

DISTEMPER.—Distemper is not easy of detection in its early stages. Sometimes it starts with watery eyes and a short cough; at others, the same sort of desire to be alone and secluded, and the same peevishness that heralds the all-dreaded disease, hydrophobia, marks its advent. If, however, in addition to these or any other unusual symptoms, there should be a redness about the eyelids, and the dog's body should feel dry and feverish, you may make up your mind as to what is about to happen.

The symptoms the dog may exhibit during the prevalence of the disease are wonderfully numerous. There is not a single inch of his body, from his head to his tail, but may seem to be the part suffering especially. The eyes sometimes, indeed generally, are very bad. Indeed, it is by these organs that the owner may tell whether his dog is really cured of distemper, or whether the disease, instead of taking its departure, is merely at rest, to break out immediately with renewed fury.

It will frequently happen that after the dog has exhibited a few of the

milder characteristics of the disease it will disappear even more rapidly than it developed itself, and, better than all, leave the patient much better than it found him. His eyes look brilliant and transparent, his nostrils are dry and comfortable, his coat clean and glossy, and his spirits not only high, but actually boisterously unruly. He does not shiver, and eats like an Arctic wolf. But don't jump to the conclusion that your dog is better. Does he grow visibly fatter again? Look under the upper eyelid; is it clear and healthy, or thickly marked with minute red veins? Unless these two questions can be answered satisfactorily, do not say your dog is well; and if within a week, or even within a month, he should grow suddenly and dreadfully ill, and, after exhibiting a complication of perplexing symptoms, die, do not attribute the death to fits, to some physical injury, or to the malicious and poisonous designs of your servant or neighbour. The simple truth is, the supposed poisoning was nothing but the second stage of distemper.

The eyes sometimes suffer very much during this disorder. The pupils seem to fade and blanch, the lids are nearly closed, and the dog seems blind. Possibly it is. Its lungs may be affected. On applying the ear to the animal's chest a harsh wheezing may be detected, denoting something very wrong in the interior.

The poor creature is constantly shivering and has a wearying cough. A viscid matter impedes the passage of breath through the nostrils, and the paws are ever busy tapping and rasping at the unfortunate nose, sometimes coaxingly and sometimes irritably, as though the poor wretch felt aggrieved that this, his leading organ, should serve him so. Besides these there are many other dreadful symptoms.

Six weeks is the average time the attack lasts, though the owner of the animal will know before that time if it will live or die. The following are bad signs. Steady dwindling of bulk, while at the same time the patient has a ravenous appetite. A very harsh and very inodorous coat, the latter

leaving a taint on the hand that is passed over it. The tongue furred, almost lead-coloured, and red and dry at its tip and edges. All these things are ominous. So is a prevalence of vermin in the dog's fur, especially if fleas or other parasites appear very suddenly and swarm in great numbers. The worst symptom of all is when the breath is exceedingly hot and foul, and when the belly and the extremities feel cold to the touch. Even then, however, so long as it keeps on its legs and is able to walk there may be a chance of recovery.

"During the recovery from distemper, small and delicate animals, terriers and spaniels, are very liable to faint. The dog is lively, perhaps excited, when suddenly it falls upon its side and all its limbs stiffen. A series of these attacks may follow one another, though generally one only occurs; when numerous and rapid there is some danger, but as a general rule little apprehension is to be entertained. The fainting fits are of some consequence if they exist during a sickening for or maturing of distemper. In pups that have not passed the climax of the disease they are not un seldom the cause of death.

"When the symptom is mistaken and the wrong remedies are resorted to, the fainting fits will often continue for hours, or never be overcome. When let alone the attack does not last, as a rule, more than a quarter of an hour, and under judicious treatment the consciousness almost immediately returns. When the fainting fits occur during the progress or advance of the disease—that is, before the symptoms have begun to amend—it is usually preceded by signs of aggravation. For twelve or twenty-four hours previously the dog is perceptibly worse. It may moan or cry, and yet no organ seems to be more decidedly affected than before.

"The uncertain character of the disease renders it a difficult matter to lay down laws for its treatment; there can be no doubt, however, that food and exercise have much influence over the complaint, in whatever shape it may appear. Everything sweet and everything fat must be rigorously

withheld. Skim-milk even is preferable to new, and ship-biscuit to be chosen before wheaten bread. If these two latter articles can be procured, a more wholesome dish of bread-and-milk may be prepared with them than with any other. Boiled rice may be given in considerable quantity, moistened—and this is the extreme limit as regards animal food—with broth from which every particle of fat has been skimmed. Whatever the sop consist of, let it be cold before offered to the sick animal."

Your care of the animal must not cease. The diet must still be scrupulously regulated, and the following tonic pill prepared:—Disulphate of quinine, one to four scruples; sulphate of iron, one to four scruples; extract of gentian, two to eight drachms; powdered quassia, a sufficiency. Make into twenty pills, and give three daily.

In distemper cases it will sometimes happen that the animal, irritated beyond control by the violent itching of a particular member—either of its feet or tail—will commence to nibble at it with his teeth. Nor will he stop at nibbling, but proceed to downright gnawing. A dog has been thus known to consume the first two joints of his tail. Applications of nauseous drugs to the itching parts are sometimes recommended as a preventive, but the best remedy is to encase the offending member in a socket of leather.

With regard to the animal's eyes, however bad they may appear, do not meddle with them. According to the best authority all water, either warm, tepid, or cold, every kind of lotion, or any sort of salve or powder, will do harm, either by weakening or irritating the organs of sight. Nature, if left to herself, will probably restore the animal's eyes to their former perfection, but any meddling with them will certainly put it to great pain, and not improbably destroy the sight, or at least leave on the eye a white seam to remind you of your folly.

CANKER.—Almost all dogs suffer from canker in the ear more or less, and when the disease is deep seated it is very difficult to cure; it should therefore be attended to directly any

symptoms are shown of its being present. In bad cases the poor dog suffers agony, and will carry one ear lower than the other. But, when there is no external sign, by pressing the ear lightly between the fingers of the hand its presence can be ascertained. The dog will shake its head or begin to scratch its body with one of its hind legs. There are several remedies for canker, but before either is applied, the ear should be thoroughly washed out, either with soap and water or disinfectant; the latter is probably the better. Then when the ear is quite dry, a little liquor plumbi mixed with water may be poured into the ear; in this application there should be one part of liquor plumbi to three parts of warm soft water. Another good thing to use for the purpose is powdered boracic acid, which may be blown into the ear. A tablespoonful of methylated spirit in a pint of warm water also makes a good lotion, or a few drops of boracic oil dropped into the ear is another useful remedy. When there is a sore on the bottom of the flap of the ear, caused by the dog shaking its head, it is a sure indication of canker; the outside sore will disappear when the canker inside is cured. Any lotion that is used for the ear should be warm.

CATS

Treatment and Diseases.—The diseases of cats may here be briefly mentioned, with hints for their cure. Cleanliness is absolutely essential. Dirt provokes disease. Let everything be as clean as possible. A cat does all he or she can to be clean. He is unwearied in licking and dusting his coat, and rubbing or washing his face. Let those who keep cats remember to profit by the example, and keep the cat clean; clean food, clean plate (or saucer), and a clean bed. The animal can easily be taught to be clean in a house. A gentle correction after the first or second offence will be found sufficient, and then the animal will ask to go out when necessary, and the request should be at once complied with.

Cats should not be put out at night. They lose their domestic virtues, and become a nuisance to all within hearing.

Some *will* roam ; but if a comfortable bed be made up for him, a cat will seldom ream at night.

To cure a cat of her ailments it is in most cases necessary to administer physic in some shape or another. This, at the very outset, is enough to daunt at least nine-tenths of the lady cat-owners in the kingdom. "As difficult as giving pills to a sick cat," is a familiar way of illustrating the extreme hardship of any task, and yet, when properly managed, a sick cat may be made to take pills or any other drug without risk of a severe scratching on your part, and danger of a dislocated neck on the part of suffering Grimalkin.

If the cat and yourself are on good terms no difficulty will be experienced in approaching her, whatever be her bodily condition. Have ready a large cloth—a crumb cloth, for instance—and wrap the patient therein, wisping the cloth round and round her body, so that every part of her except the head is well enveloped. Any one may then hold it between their knees while the operation is completed. Put on a pair of stout gloves, and then, with a firm hand, open the animal's mouth wide. Do not attempt to pour down the cat's throat too much at a time, or your object will be frustrated. A small spoon should be used, and no more poured into the mouth at a time than may be easily swallowed.

Be very careful to cleanse the fur of the animal's face and neck of any physic that may have been smeared thereon. The cat, of all things, dislikes a dirty coat, and as the nastiness of the medicine will prevent her licking herself clean, she will go about in a miserable condition, and one that will probably counteract the good effects of your doctoring. After the dose has been swallowed the patient may be unwashed, and turn her into a quiet room, where there is something soft for her to lie on, and a cheerful fire. Do not offer her any food for at least two hours after the administration of the physic.

Diarrhoea is a very common complaint with cats. It may be known by the animal's becoming thin, by her coat being dirty, and by her dull eyes. Unless this be checked dysentery will

set in, and the cat's life be sacrificed. An ounce of fresh mutton suet, dissolved in a quarter of a pint of new milk, will, if the malady be taken in its earlier stage, effect a speedy cure ; or a little castor oil, with two drops of muriate of morphia (*Stables*). The milk should only be warm enough to melt the shredded suet ; and if the cat be too ill to lap, put one or two spoonfuls into its mouth every two hours. If the scouring do not abate, a spoonful of chalk mixture, with eight drops of tincture of rhubarb, had better be given, and two drops of laudanum between the doses three times a day.

Fits of delirium sometimes attack cats. The animal may be discovered, with staring eyes and bristling fur, rushing here and there in a way most terrible to see. Generally it finishes by plunging into the darkest corner, it can find—into a lumber-room or the coal-cellar, may be—and will there remain to die, unless attended to. There are several remedies for this disorder, but that advised by Lady Cust is certainly the most efficacious.

"Take a sharp pair of scissors and slightly slit one of the ears, but not to disfigure the cat ; it must be in the thin part of the ear. Have ready some warm water, and hold the ear in it, gently rubbing it, and encouraging the blood to flow ; a few drops give relief. The most timid lady need not fear to perform this slight operation, as during the attack the animal does not feel, nor does it resist in any way ; but the wearing of thick gloves is to be strongly recommended in handling the animals. When the attack is over keep the cat quiet, as it will be observed to be very nervous after, and alarmed with the slightest sound ; and let its food be rather less in quantity and less nutritious in quality till it is past the time of fits.

Cats will never prosper without grass to eat !

In the first place, it cools the blood, preventing humours, and contributes to the healthy condition of the skin, rendering the fur fine and glossy. It has also a material effect on the general health. Every one must have observed the constant licking bestowed on the coat, and the rough nature of the

tongue. Consequently, the loose hair is conveyed to the stomach and intestines, where it remains in balls or long rolls, causing dulness and loss of appetite, and ending in death. The hair swallowed adheres to the rough grass, and is then digested, or, if the mass is too large (as is often the case in the moulting season, especially with Angora cats) it will be seen thrown up—long rolls of hair with grass, perfectly exclusive of any other substance; and the animal that a few minutes previously was dying, will now be relieved, and take its food as usual.

In the spring and autumn cats are frequently afflicted with a disease resembling chicken-pox in the human subject. The head and throat are the parts chiefly attacked, the hair falls off, and the animal's appearance is very miserable. Rub the places with flour of brimstone mixed with hog's lard.

When the cat has kittens, never be so hard-hearted as to carry off at one swoop the whole of her little family. There is no animal on earth that exhibits more affection for its progeny than the cat. If her children are taken from her she goes for days stalking about, a lean and wretched cat, filling the house with her melancholy mewings. Therefore be merciful. If the entire litter *must* be destroyed, take them away one at a time, allowing a day or two between. Motherless kittens may be reared by hand by sweetening new milk with brown sugar, and feeding them with the mixture several times a day. The best substitute for the healthful licking afforded by the mother's tongue is a soapy sponge squeezed nearly dry.

"Cats have a very dangerous complaint which is called distemper, though it is different to the distemper in dogs. It never attacks the same cat more than once; and it is well it does not, as it requires every care and attention to save the life of the sufferer. Sometimes it begins with constant vomiting of a bright yellow frothy liquid; diarrhoea then comes on, which ends in dysentery. If you see the yellow vomiting, give a small dose of salt and water; in this case it will act as an emetic. When the stomach is cleared, then, as the vomiting

will continue from irritation, and reduce the strength to the last degree, very painful to witness, stop it as soon as you can, by giving half a teaspoonful of melted beef marrow, free from skin. One dose is generally sufficient; but if it is not, another half spoonful may be given in half an hour.

"The secret of success in the rearing of cats," said a well-known cat fancier, "is unceasing care and attention, and judicious feeding—for over-eating produces eczema—and an avoidance of coddling. My kittens spend the day in the garden when the weather permits. The flower beds are covered with cocoanut fibre, in which they frolic about. You must never let Persians be out of doors in the wet. Their thick coats will not dry easily, and they get chills and die."

"Don't keep many cats if you wish to make a profit," said another fancier, the owner of thirty. "As to feeding, I give two meals daily. Variety and vegetables are great points in cat-feeding, but it is impossible to lay down hard and fast rules, as no two cats feed alike. Plenty of fresh water, just as much food as they will eat at a time, warm milk morning and night, with a little water added and bread crumbled in, are all necessary."

RABBITS

The breeding season with its attendant operations lasts from February up to the end of October (beginning of November; and rabbit keeping may be well begun by purchasing a doe in kindle early in February; and for convenience sake we will call this the commencement of spring.

The doe should be fed on hay, and as unnecessary quantities of food are often thrown down, we may remark here that about 1 lb. weight of hay per week is sufficient for its support, together with a small quantity of oats or barley. About a couple of table-spoonfuls a day will be found enough, together with a little green food and a root of some sort, as a parsnip, or carrot, rabbits being very fond of the latter.

Early in March the doe will bring her litter, and she should now be fed

liberally with biscuit, boiled rice or boiled potatoes, soaked in skimmed milk, a description of food which encourages the secretion of milk, and so the young are brought on well through the mother.

A supply of succulent green food should be given also in moderate quantity only. The doe will give signs of her kindling-time approaching, as a few days beforehand she will prepare a bed for her anticipated young, by stripping off the down from her breast, and preparing with her mouth bits of hay or straw to form the nest, which she will line with the fur she takes off for the purpose.

At this time a doe-rabbit should on no account be handled, but be left quietly to herself as much as possible, with only the necessary attention to her wants given. After she has suckled her young for two or three weeks her allowance of oats should be increased, and she should be allowed to have access to the buck upon two consecutive days, and by this method of treatment no time will be lost in obtaining a succeeding litter. When the young rabbits are a month old they may be removed from the mother and placed in a hutch by themselves, the most roomy compartments being set aside for this purpose. The weaned rabbits should be fed upon hay, corn, and biscuit, with a limited supply of green food.

Assuming, for the sake of convenience, May to be the commencement of summer, early in this month the doe will bring another litter, when the same treatment should be pursued as before with her, the weaned rabbits now receiving a more liberal allowance of green food; and at the end of the month they will have attained to the limit of the twelve weeks, the time allowed for them to attain a size and age sufficient for killing, which may now be done, and the total cost of their keep will be found to have been but trifling.

Early in June the second litter may be weaned, they occupying the hutch now vacated by the first litter, which had been summarily disposed of, and the same proceedings are followed as before. At the beginning of July the

doe will bring another batch of young; and again the same routine has to be followed.

Autumn, we will say, now commences in the allotted course of rabbit economy with the advent of August, and the third litter may be weaned, and the second sold off or killed, the doe again visiting the buck as before, a succession of litters being produced and disposed of up to the end of October, or the beginning of November, according to the time they fall, which will be slightly varied according to circumstances.

From November till February in the following year the doe should have rest, and not be allowed to breed again.

Rabbits should be fed twice a day, in the morning and in the evening, and the young which have been but recently weaned should only be very sparingly fed at first with green food. By giving them wet cabbage leaves, which is often done, diarrhoea is brought on. Carrots, parsnips, Jerusalem artichokes, and boiled potatoes are the best roots to give rabbits; they will eat mangold, but do not relish it, and some who have paid a great deal of attention to rabbits commend chicory, field parsley, and comfrey, in preference to some of the coarser and more succulent green-meats that is often grown, and these stand growing for a considerable time out of the year, and offer a convenient "cut and come again" supply.

As the doe will bring a litter about every seven weeks under the course of treatment recommended to be followed, she must be liberally supplied with plenty of succulent food as well as dry corn to build up her stamina. When doe-rabbits eat their young, which is often the case with badly-managed stock, it is well to remember that this unnatural habit is caused by *thirst* in most instances, and the best way of obviating the chance of this occurring is to give her a plentiful supply of biscuit soaked in skimmed milk.

Salt should be given in small quantities, a pinch mixed with the bran doled out to the young being useful. None should be given to the doe whilst suckling, although at other times a little is beneficial to her, but strictly

her young are to be weaned some should be administered, as it tends to dry up the milk.

As wet food is very injurious to rabbits, especially the most succulent kinds, as cabbage, which is very commonly given to them in large quantities, though the practice is a bad one, it should not be given quite fresh, as is sometimes the case, covered with dew or rain, but be placed aside for a few hours, so that some of the redundant moisture may be evaporated.

Placed upon a sieve, or hurdle raised above the ground, the moisture will have an opportunity of draining off. This kind of food given in great quantities is the fruitful source of disease in rabbits, and although it may be economically resorted to in moderate quantities, dry food should always be given as well, as an accompaniment to counteract its effects. Some people appear to think cabbage leaves alone sufficient food for a rabbit, so it only has enough of it, and consequently the supply is not limited as it should be. Cabbage leaves with the frost on them, or any other vegetables in this condition, are highly injurious.

Hay, clover-hay, oats, barley, bran, peas and beans are all excellent dry food for rabbits, which, like human beings, relish a change in their diet occasionally, and correspondingly thrive upon it. Certain foods produce certain effects, and very often a change of victuals produces a necessary alteration in the system of an animal, as too much dry food, or dry food alone, is of a somewhat heating nature, which a proper admixture of that of a more succulent order will modify, while too much green-meat, on the other hand, is injurious by relaxing.

Ten days before the rabbits are killed for the table or for sale, as the case may be, they should have a more liberal supply of food given to them to make them fat, such as boiled potatoes and milk, oats, peas, biscuit and skimmed milk, and plenty of good sound hay, which should be placed in little racks, of such a form that they cannot pull down large quantities to waste, but only enough for them to eat.

The best way of killing rabbits is to stun them with a sharp blow behind

the ears, and bleed by cutting the jugular vein, the blood-letting causing the flesh to become very white. Directly the rabbit is killed the paunch should be taken out, and a wholesome old-fashioned practice may be followed even now to advantage, of putting a few green herbs, such as sage or thyme, inside after the paunch has been removed, which will come clean away with but very little trouble when removed by practised hands.

It only remains to remark that none but healthy rabbits should be bred. A doe or buck may appear healthy and strong in bodily condition, yet exhibit some comparatively trifling ailment. These should not be made use of for breeding purposes, for the apparently trifling ailment may become more pronounced in the progeny, and the quality of the whole stock deteriorated. If the doe is kept too long from the buck after parturition she will not thrive.

Most, if not all, the diseases of rabbits are attributable to dirt, or neglect in some form or other.

Scab or rot is one of the most offensive forms of disease to which rabbits are subject, and exhibits itself in a thickening of the cuticle by the occurrence of a sort of white deposit upon it, which mats the hair together, and will eventually assume the form and character of a running sore, which is sometimes, but not always, accompanied by a swelling of the belly. The cause of this disorder is dirt and foul hutches, the feeding upon damp food, or food of an unsubstantial character.

Give five grains of sulphur each morning in bread and milk, and use externally an ointment composed of the proto-nitrate of mercury. Change the food, and substitute that of the best quality, and also give the patient change of air, and remove it to a sweet, wholesome locality.

Snuffles are the indication that a cold has been caught in the head and nose, often occasioned by damp, but when the animals are kept dry, exposure to keen winds will produce them. If not arrested at once, inflammation of the lungs may ensue. Remove the patient into a dry, warm place, and feed it on the best nourishing food.

Young rabbits are the most subject to diarrhoea, generally caused by wet food, or too much succulent food interspersed by dry fodder, as corn, hay, or bran, which consequently must be changed.

The young are usually affected by ophthalmia, mostly when they are about a month old. Dirt is the occasion of their eyes being affected, owing to the ammonia thrown off by the dung and urine which is allowed to accumulate in the hutch. The affected rabbits should be immediately removed to sweet and clean hutches, and their food changed, dry fodder being given. The affected eyes should be bathed once or twice a day, with three grains of sulphate of zinc in an ounce of rain water.

Dropsy is one of the most frequent diseases to which rabbits are subject, and is caused by wet food, or food of a not sufficiently substantial character; by bad or foul air, filthy hutches, or by crowding up too many animals together in one compartment. Thorough cleanliness must be resorted to first, accompanied by feeding with dry food, burned barley, bread, and, instead of the usual green-meat, give them aromatic herbs or parsley *quite dry*, sage, thyme, and lavender.

Foul air and bad food are the chief causes to which diseases of rabbits kept in confinement are due; if they are kept dry and clean, and not too much crowded, are fed with substantial food once a day, and do not have given to them too much of a succulent or unsubstantial character, they will seldom ail anything, diseases amongst wild rabbits being almost unknown, unless traceable to contagion from stock.

Rabbit skins are cured in a very simple and easy manner, by tacking the skin with the fur downwards to a board, and removing with a sharp knife any bits of fat or pieces of flesh that may remain adhering to it, and afterwards rubbing it with an ounce of alum dissolved in half a pint of soft water. The alum and water should be applied with a sponge or flannel, and be rubbed twice a day for three days. The skin should then be dried in the sun, or in wet weather before a

slow fire, and the slight degree of stiffness that remains after the treatment may be removed by rubbing it briskly between the fingers and drawing it up and down between the half-closed hand.

The cost of keeping rabbits is very trifling when proper economy and supervision of the food are used. It is calculated that a young rabbit of 4 lb. weight from the time it is weaned from its mother, and killed at twelve weeks old, will only consume a total weight of 20 lb. of green food, and 12 lb. of dry food, but of course in this calculation no account is taken of *waste*, but only that which is actually consumed and eaten; and this, as may be seen, will leave a considerable margin of profit. A full-grown rabbit of average size; it has been computed, will eat about 3 lb. of green food per week, and $1\frac{1}{2}$ lb. of dry food, but, in feeding, too much should never be given at once, and the leavings of one meal must not be expected to be eaten at another.

As the winter is the unprofitable season for rabbit-keeping, as few as possible should be kept through the winter months. It is no good keeping the bucks, unless specially valued on account of breed, and then their use is somewhat doubtful, as a change of blood is necessary, so that under ordinary circumstances the stock may be limited to a few breeding does.

Our remarks have borne mainly upon rabbits of an ordinary description, but as a valuable animal costs no more to keep than a common one, the breeders of fancy rabbits often make a good deal of money by their sale, there being generally willing purchasers of a good variety, especially of any particular sort that suits the fashion of the hour. Five pounds is no uncommon sum to be given for a good buck-rabbit that is required for breeding purposes, and a pure stock, whatever the kind may be, should always be aimed at—to have the best of the sort.

THE GUINEA PIG

The Guinea pig is of little direct use to mankind. Its flesh is unfit for food; and its hide, on account of the slight attachment of the hair to the skin, is unavailable for further purposes.

Nevertheless, it is a pretty pet, and an observance of its habits, especially its scrupulous cleanliness as regards its coat, will repay the attention it is necessary to lavish on it.

The Guinea pig's cage should be well defended against cold and damp, as unless the animals are kept perfectly warm and dry they will never thrive. Like the rabbits, they prefer gloom to light, and thrive very well in a portable hutch. As regards drink, there marks made in the case of the rabbits apply also to the Guinea pig. The animal is very fond of milk. •

As regards food, any sort of vegetable food seems acceptable to the Guinea pig; herbs of most kinds may be given it, not forgetting an occasional sprig of parsley, of which it is specially fond. Carrots and carrot-tops, apples, oats, and tea-leaves, may be safely placed in the hutch.

The female goes with young three weeks, and after suckling them for three weeks turns them off to shift for themselves. When first born the little pigs have their eyes open, and are covered with hair. They do not, however, attain perfect growth till the age of eight months, soon after which they will begin to reproduce their species.

THE SQUIRREL

The time to buy a squirrel is about the end of September, for then the animal, if newly caught, will be fat, healthy, and vigorous, and its fur in its prime. Never mind about the creature's tameness; if you wish to cultivate its friendship it will be better to tame it yourself. The key to the squirrel's heart is of the same old pattern, and is called by the same old name as the key to every difficulty, little or big, that the world may present—patient kindness. House him in a cage in which is comprised a great revolving cylinder of zinc wire, and to which is attached a snug little ante-room, to which he may retire when he feels so disposed. Squirrel-cages being pretty much of one pattern, and that pattern being seemingly well adapted to their habits, nothing further need be said on that head, except it be—have your cage *large* enough. •

As to the squirrel's food, you must be guided by his habits while in a state of freedom. He will enjoy any sort of small nuts (it will be as well to avoid those of a very oily nature) or some grains of wheat, or an acorn; a stale crust of bread will be taken between his little hands with a deal of pleasure, and as a treat a bit of boiled potato, and even a bit—a little bit, of course—of fresh meat will do him no harm. This will not be outraging the squirrel's nature, as in a wild state he frequently asserts his claim to be classed with the carnivora by robbing birds' nests, and carrying off members of the young brood.

WHITE MICE AND RATS

Many people, especially young folks, are very fond of these little creatures; certainly, when properly kept in good health, they are very amusing. They may be bought for a small sum at the bird fancier's. White mice and rats are what are called albinos—they have red eyes. It is wonderful how clean they will keep themselves, but it must be remembered that their cage must be kept clean for them. It should have a sleeping-place like a squirrel's cage, and sand ought to be strewn on the floor.

White mice and rats may be made so tame, by care and attention, that they will come at their master's call, eat out of his hand, and even perform a variety of tricks. The best food for them is bread sopped in milk, and then squeezed tolerably dry in a handkerchief or a piece of cambric. Peas and beans may be given to them sometimes, but never meat or cheese, which are far too heavy a diet for these little prisoners, and will soon make them feel uncomfortable and unhappy.

GOLD AND SILVER FISH

There are two methods of keeping gold and silver fish; first, in ponds or large tanks, in which they will breed and multiply famously under favourable circumstances; secondly, in glass bowls, in which they look very ornamental, but require very little care and attention. In keeping gold fish in bowls be very careful in the first

instance to procure healthy, shining fish. The signs of disease in a gold fish are its coming frequently to the surface of the water, and occasionally making a clinking noise. When strong enough to breath properly beneath the surface it will seldom do this.

The water should be changed every day, and the bowl must be frequently wiped round the inside with a cloth, to get rid of any slime that may adhere to it. A few bread crumbs, very small, given once a day, are enough in the way of food. Do not put too many fish in one bowl, or they will hunt each other to death. Have a few pebbles at the bottom of the bowl, or better still, a few sprigs of box. Do not let the bowl be shaken violently, for gold fish are very susceptible, and this often kills them. Keep them near an open window, that they may have plenty of light and air, but do not let the sunshine full on them. Whenever the water in which they swim becomes turbid it requires changing.

REPTILES

As to the animals to be kept in the vivarium, the tree-frog, the salamander, green lizard, eyed lizard, wall-lizard, West India anolis, viviparous lizard, and blind-worm are desirable inmates, usually thriving in confinement. The various kinds of frogs and salamanders must be kept separate from the lizards, as when kept together they are apt to fight; and, besides, while the saurians require to be placed in the full sunlight, the batrachians should be kept in a cool, shady place.

As to food, all the species will eat mealworms readily when flies are scarce, these being by far their most favourite food. The mealworms may be put in a jar, with flour and a few pieces of brown paper, where, if tied up tightly and kept for some time, they will increase rapidly, so that a stock may always be kept up. The different kinds of snake must be kept in separate cases, and fed with frogs, of which one or two will be consumed in a week by a large specimen of the ringed or common snake. This kind may be readily tamed.

The lizards may be supplied every

day with fresh flies or mealworms. When kept in this way nearly every sort of lizard will breed in confinement; but several species have a habit of eating their eggs, although at the same time they may be supplied with plenty of food. To prevent this, the eggs should be taken out at once, and deposited, covered with sand, in a shallow box exposed to the rays of the sun. When hatched, the young lizards may be fed on small flies and raw meat, minced very fine. They may be kept in this way till they have grown to a considerable size, when they may be put with the full-grown animals in the vivarium. Although the tree-frog is one of the most interesting to keep, it is one of the most difficult to maintain in health, as sores often make their appearance on the head and lips, and frequently prove fatal. There is no certain cure; it is best, as a rule, to leave the healing department to Nature.

CAGE BIRDS

As to the terms "hard-billed" and "soft-billed," the former is applicable to all birds with short, strong, and more or less thick bills; they feed, for the most part, on grain, seeds of various kinds, nuts, and similar hard substances, which they prepare for eating by shelling or crushing them between their mandibles; soft-billed birds, on the contrary, live mainly on fruits, worms, insects, herbs, etc., or, if they partake of corn, swallow it whole, as do the pigeons and doves for example, and have bills that are much longer, narrower, and less powerful than those of the preceding group.

The terms, however, are rather elastic, for there are many species of birds that do not really fall readily into either of them, although such creatures as hawks and owls, crows and magpies are often spoken of indifferently as hard or soft-billed. The difficulty is a real one, but it can be got rid of here by remembering that we are only dealing with birds that are suitable for keeping in cages in the house, from which owls and hawks are necessarily excluded, if the magpie forms an occasional exception to the rule.

Seeds for hard-billed British birds :— Canary-seed, hemp, spray millet, summer and winter rape-seed, and occasionally, for a change, a little maw (poppy) and linseed (flax). For young birds, especially goldfinches, linnets, and bullfinches, it is a good plan to soak canary-seed and to scald rape-seed. The first should be soaked in cold water for twenty-four hours, and when strained should be wiped dry in a cloth; rape-seed should be covered with boiling water, strained when cold, and also dried in a cloth; enough to last for one day only should be prepared at one time, as soaked and scalded seed will not keep.

For soft-billed birds of all kinds, foreign as well as English, the following is a very good staple food: liver of horse, bullock, or sheep, boiled till hard, and grated when quite cold, one part; ants' eggs, freed from rubbish of all kinds, half-part; fine oatmeal, one part; and preserved yolk of egg, half-part. Mix well together, and, if not quite dry, spread out thinly and evenly on a tray or sheet of paper, and place in a cool oven till perfectly dry; then preserve in closely-stoppered bottles. When wanted for use, mix as much as will last for one day, with an equal quantity of freshly-grated raw carrot. This must be supplemented by mealworms, gentles, or other insects in suitable proportions, or fruit to such birds as eat the latter.


For foreign hard-billed birds, the best seed is white millet; but the French, or spray millet, may also be supplied, and is much relished by most of them. "Mixed seeds" of all kinds should be avoided, as they all contain some that are useless, and many are partly made up of seeds that are positively injurious.

Parrots—that is, the large kinds—eat maize (cooked or raw), hemp and canary-seed; they may have a piece of plain biscuit, a few wats, and a little fruit occasionally. For drink they should have plain water, not left in the cage, but offered to them in a cup or spoon, two or three times a day. Should they evince a desire to bathe, it is best to sprinkle them gently from the rose of a watering-can. This is most conveniently done on the

lawn; but, of course, is only practicable in fine, warm weather.

N.B.—Never expose any bird, English or foreign, to the full glare of the sun for more than a few minutes.

Small parakeets eat white millet chiefly, but may also have canary-seed, and, if they are breeding, some white oats or a little coarse oatmeal. Lories and lorikeets require soft food; the best is rice, well boiled in milk and sweetened with honey or cane-sugar; in addition, canary and millet-seed may be offered to them, though but few ever touch it; ripe, sweet fruit they will thoroughly enjoy.

If it be desired to breed parrots and the larger parakeets, they should be provided with a small barrel or a hollow log of suitable size, which should be hung sideways  at a convenient height from the ground; the entrance may be at one end or in the middle—it does not matter which—and no nesting-material of any kind is required, as these birds lay their eggs on the bare ground; incubation lasts from seventeen to twenty-one days, and the eggs, which are all white, vary from two or three to seven or even nine, according to size and species, the smallest sorts being the most prolific. A cocoanut husk makes a good nesting place for the latter. The only members of the parrot family that line their nests are the lovebirds, which use shreds of fibre and bark; the kea, which employs the last; and the monk parakeet, also called the quaker, which builds a nest with sticks among the branches of a tree. The Indian parakeets often breed in holes in buildings as well as in those of trees.

All birds of the finch tribe will nest in the ordinary boxes provided for canaries, while those that are more nearly related to the sparrows nest either in a hole of some kind or build themselves a domed residence among the branches of a tree. The weavers display the utmost ingenuity in the construction of their wonderful nests, which are made of grass and fibre, and many of the small foreigners will nest in a cocoanut shell, which they line with hay and feathers.

Cages for birds should be of sufficient

size to enable them to exercise freely, and care must be taken not to crowd; especially is this necessary if the birds are kept in the house. Needless to say, the utmost attention must be paid to cleanliness, both for the sake of the birds themselves and the human inhabitants. For the floor or tray of the cage sawdust is preferable to sand; this can be laid down thickly, be raked over every day, and renewed once a week. Grit that is coarse, or coarsish sand, must be supplied in a tin; it is as necessary to the bird as food, for without its assistance in the gizzard the food cannot be digested and properly assimilated.

Where possible, straight perches ought to be avoided and be replaced by a branch or branches of a tree, so that the feet of the bird may be rested on twigs of different size.

Green food is a very vexed question, and amateurs will do well to be careful. Watercress is quite inadmissible, unless for a goldfinch, and then it should be well washed and dried by pressing it in a cloth. Groundsel and plaitain are the best green food for our native birds, and grass for the foreigners.

Some of the Most Popular of British Cage-Birds.—Canary, goldfinch, bullfinch, linnet, chaffinch, sparrow, tits, thrush, blackbird, robin, larks, magpie, jackdaw, rook, raven, doves, foreign starlings, mocking bird, parrots and parrakeets, cockatoos.

PIGEONS

Extreme cleanliness is absolutely necessary to the health—nay, to the very existence of the pigeons. They possess remarkable warmth of body, so that if you allow dirt of any kind to accumulate on or near them, sickness will be the inevitable result. Sweep out their house every morning, and at least twice a week garnish the floor with some bright sifted gravel. Don't forget the first essential in all households—clean water! Let them have a broad shallow pan full of it, and let the pan be replenished every morning. In the hottest summer months twice a day will not be too frequent. This will entail some little trouble, of course, but the pigeon

keeper will find himself amply compensated if he will take the pains to watch through a chink, and see the grateful little creatures washing and pluming and plunging about in their refreshing bath. Besides this they will require a constant supply to drink, and to guard against its becoming fouled by their excrement (as would speedily be the case if the water was contained in an uncovered vessel), a little ingenuity is necessary. No end of elaborate and expensive vessels have been invented.

Avoid purchasing old birds. They may be more immediately valuable on the score of breeding, but as a set off to this advantage it is almost certain that their first flight from your dormer will be their last.

It is advisable to purchase pigeons that are from a month to five or six weeks old, before which time they will have attained but little strength of wing. They begin to peck for themselves when they are five or six weeks old, and the sooner after that they come into your keeping the greater will be your chance of keeping them. Until, however, you are sure the pairs have really mated—until, indeed, they have laid their first eggs—it would be unsafe to trust them abroad. They would almost surely be inveigled away by the knowing old pigeons of the neighbourhood.

To distinguish the sexes during squeakerhood is rather a difficult matter to a new hand. In half a dozen birds, of the same age, the cocks may be known by their superior size, and the female squeaker has a more prolonged squeak than her male companion.

The sorts to be selected entirely depend upon the taste of the keeper. If amusement be his only aim, then he should purchase tumblers. If he be determined to have none but highly respectable and graceful birds about his premises, he should buy archangels or nuns or owls. If profit be the sole consideration, then purchase rats. They are neither handsome nor good flyers, but they are wonderfully prolific, and substantial fellows for the spit or pie.

But there can be no

start with the cheapest and commonest sorts is the best plan. If they abscond the loss will be but trifling, and if they stay with you a month, not only will you have a better chance of retaining any of the more valuable sorts you may afterwards introduce, but the old lodgers will be useful as egg hatching to their aristocratic neighbours, should such service be required. The best time to begin to found a colony is about July.

Pairing and Breeding.—When your squeakers have reached six months, you may "put them up for breeding"; that is you may enclose the pair—the cock and hen—in a cage, out of sight of any other pigeon. At the expiration of two days you may give them their liberty again.

Presently the hen will set about egg laying. First she lays one, which she keeps faithful guard over, and next day she lays the other—always two, never more nor less.

The shells burst and the chicks emerge at the expiration of seventeen days from the laying of the second egg.

Feeding.—Their staple food should be mixed pigeon's food. They will, however, thrive well on wheat, oats, maize or barley, separately or mixed. The smallest of beans, known as pigeon's beans, may also be given, but should be mixed with some milder grain. Care should be taken that the pigeon beans are not newer than a year old, or they will scour the birds. Seeds are sometimes given as stimulants, and many use hemp seed for the purpose. Rape seed is, however, far preferable. Hemp seed is of an exceedingly heating nature and apt to induce skin disease. Equal care should be taken that whatever food you give them is not decayed, and full of mites. If you have the least doubt on the subject, bake the suspected grain for half an hour. Mites swallowed alive, and remaining alive in the stomach, have destroyed many a bird.

There is hardly any kind of grain or corn which pigeons will refuse, but their preference seems to be given to hemp seed over every other.

TORTOISES

A tortoise should be allowed to have

the run of the garden, which should contain plants of the juicy order, such as lettuce and dandelion; then leave it entirely to its own devices. During the summer months it will crawl about in a lazy, happy way, eating moderately, sleeping soundly, and troubling nobody. As winter approaches if it is let alone it will probably dig itself a grave in a flower-bed, and bury itself comfortably till the sun's returning warmth rouses it from its lengthy nap, and it scrambles out of bed to begin another summer.

THE MANAGEMENT OF BEES

Whether straw hives or wooden boxes are best for bees is hard to determine.* Supposing one to be as good as the other, straw hives are most picturesque and comfortable looking.

The situation of the hive is of considerable importance. Indeed, there are certain localities where one would be wise to eschew the keeping of bees altogether; as, for instance, near the banks of wide rivers, or by the sea shore, for, on their homeward voyage, like a fleet of richly laden sugar ships, a storm may arise, and they may be driven out to sea, and there be wrecked and drowned. Water, however, is essential to the bees' well doing: it is needful for moistening the pollen on which the young are fed. You are lucky if within a little distance of your house there runs a bright shallow little brook, for on the stepping stones the bees will rest and sip the sparkling liquid to their hearts' content.

The bee house should not be far removed from your own, and the bees' feeding-ground should not be too far from home. No doubt they will travel incredible distances in search of suitable food, but wary in this as all else, they will never be found with so heavy a load coming from a great distance as when their pasturage is close at hand. Most flowers cultivated in gardens are good for the bee, as is sanfoin, buckwheat, and clover. The horse-chestnut and the lime tree are bound to pay heavy toll to the bee—and should they happen to be in your vicinity a heath or common, well covered with furze, the quality of your honey is assured.

Poisonous plants, it would seem, yield no poisonous honey.

The hives when they occupy open ground should each be placed on a separate stand, at least three feet apart. The aspect should be southerly, and they should be protected from rough winds. A good authority on the subject says, "It is not material in what aspect the stock stands, provided the sun shines upon the hive once in the course of the day, as well-peopled hives, kept dry, will thrive in most situations."

If after swarming, the weather should become unfavourable, you must supply your bees with food. Any sugary syrup will answer. It may be placed in a saucer with some chips of wood to serve the bees as rafts to settle on while they feed.

The bee has many natural enemies, which it cannot overcome without the assistance of man, and therefore the bee-keeper should take care to destroy the enemies of his friend the bee.

The mouse is a dangerous enemy, for if he gets into the hive he tears down the combs, makes havoc with the honey, and so starves the bees. To prevent this take care that your hives are well and closely wrought—for if the straw be loose and soft the mice will easily make their way through into the hive—also take care that your hives be closely daubed with cloom, that they may have entrance nowhere about the skirts except at the door. It is a good plan to occasionally take off the hives, not only for this but other causes.

The woodpecker and sparrow are both enemies to the bees, the woodpecker with his long round tongue sucks out the honey, but he does more mischief to wood bees than those of the garden; the sparrow will devour bees from the time of first breeding until the wheat is kernalled.

The titmouse is another enemy, of which there are three sorts. The great titmouse, from his black head and breast called a coal mouse, is the worst enemy to the bees: he will watch at the hive for the coming and going out of the bees, he will stand at the door of

the hive and never leave off knocking until a bee comes to see who is there, and then, suddenly catching it, away he goes, only to return immediately he has eaten it: eight or nine will scarcely serve his turn at once. If the door be shut that none of the bees can come out he labours to remove the bar. If that be too heavy, he falls to undermining the door for a new way; and when these devices cannot get the bees out, some have the skill to break the daubed walls of the hives above, over against the place where they lie, and there they are sure to have their purpose. This is the greatest enemy the bee has, sometimes called the bee-biter. The little russet titmouse in winter feeds only on dead bees; but in the spring he will take part with the great ones. The little green titmouse can only be accused of eating some few dead bees, and that only when very hungry.

The swallow is another bee-eater, who catches the bees as they fly, and that not far from the hive, when they come weary and laden home.

The hornet is much too strong for the bees and is a great devourer of them. In destroying the hornet you must be careful, for their stings are dangerous.

The wasp is a great enemy of the bees, and more hurtful than the hornet, for the wasps destroy the honey as well as the bees themselves. The best way to destroy them is to kill the mother wasps when they first come abroad; you may take them with your flag at your bee doors on the hives, where they sit sunning themselves, and on the gooseberry bushes from the beginning of May.

The spider is another enemy, which harbours between the hackle and the hive, and you will seldom find that it has not two or three bees in store to feed on, and sometimes when the bees are weak the spider will be bold enough to enter the hive and there weave its fatal web. Ashes strewn on the outside of the hive will prevent the spider's entry.

PHOTOGRAPHY

THE PRINCIPLES OF A LENS

When the rays of light pass through ordinary glass they keep parallel to each other, but when they pass through glass which is either concave or convex the rays do not follow a straight course, and are bent according to the concavity or convexity of the glass, which is then called a lens.

The rays are refracted or bent, and meet at a certain point, called the "focus." The distance between the lens and this point is called the focal length of the lens. Lenses that are thicker at the edges than in the centre are called diverging lenses, and those that are thicker in the middle are termed converging lenses.

The lens is an instrument for gathering up all the rays of light which are reflected from any object, and transmitting them to the plate so as to form an image of the object there by virtue of the action of light on the film of gelatine and silver bromide. The camera is merely an apparatus for protecting the plate from all light except that which reaches it through the lens.

We have seen that the rays of light, when passing through a lens, meet in one plane at a definite point, called the focus. As for any subject within a certain range, the focus varies, the camera is provided with bellows, so that the plate may be made to approach or recede from the lens by turning a pinion. The plate can thus be brought in the same plane as the point where the rays, passing through the lens, meet. The plate is then said to be "in focus."

It is most essential that the plate be placed in focus, for if not in the correct plane the picture will have that blurred appearance which we so often see in amateurs' prints.

In order to know what should be

the right distance between the lens and the plate, the camera is provided with a ground-glass screen, called the focussing screen, usually held in a frame made of wood. The rays of light passing through the lens will strike the ground glass, and will reproduce on it whatever subject is placed in front of the lens.

But if we cause the screen to approach or recede from the lens, it will be noticed that there will be one definite position, in which the subject will appear quite clearly and with great detail.

The subject is then said to be "in focus," and the act of getting the plate in focus is termed "focussing."

It is our aim to allow the rays of light to strike our plate in that plane, and if focussing be done accurately, a picture with very great detail may subsequently be obtained.

In order to focus more sharply, a focussing glass is often used. This, as a rule, consists of an ordinary magnifying glass mounted at the end of a short tube.

After having focussed the subject accurately, the focussing screen is thrown back and the plate-holder containing the plate is substituted for it. This holder, which is technically called a dark slide, is constructed in such a way that when substituted for the focussing-screen, the film of the plate, which it contains, is exactly in the same plane as the glass of the focussing-screen.

It is a *sine qua non* that no light should reach the plate either before or after the exposure, and consequently the dark slide containing the plate must be quite light-tight. Having covered the lens with the cap, the dark slide is inserted, the shutter withdrawn and the exposure made. In other words, the rays of light passing

through the lens may now be allowed to fall on to the plate and reproduce on it the subject which was in front of the lens.

The exposure varies considerably according to the construction of the lens, the sensitiveness of the plate, and the conditions of the light at the time of exposure. The usual method of making an exposure is to leave the lens uncapped during a certain length of time. After exposure the shutter of the dark slide is pushed in and the plate is ready for development.

Development is the operation of rendering visible the latent image which the light has produced on the plate, and the various chemical solutions which do this are called developers.

Since the effect of light is to darken the plate (on development), white objects, which reflect the most light, will appear black and vice versa, with the result that a "negative" is obtained in which the lights and shadows of the object are reversed.

It is necessary that all the operations and the handling of the plates should take place in a dark room in which all actinic light has been excluded, and only light filtered through a ruby or dark orange glass should be allowed to enter in the room. Light that has been passed through glasses or fabric of these colours does not affect the plates in any way.

After development, the plate is rinsed in cold water and finally the silver bromide, which has not been affected by light, is dissolved away in hyposulphite of soda (this is called "fixing"). The plate is then no longer sensitive to light, and is washed again in running water for from thirty to forty-five minutes. After the plate has been allowed to dry thoroughly, the printing operations may be started.

The usual method is to place the negative in a wooden frame with the film upwards. Next to the film of the negative is placed a piece of what is known as "sensitised paper," or P.O.P. This is paper coated with an emulsion which is affected by the exposure to light.

The emulsion on the paper is much less sensitive than that on the plate,

and need not be handled in the dark; but may be put in the frame in subdued daylight.

In the operation of printing, the light passes through the negative and reaches the paper. As the negative is more opaque in some places than in others, so more or less light passes through each variation of the film of the negative, and the paper is affected according to the density of the particle of the plate in contact with it. As previously stated, the plate, after development, is negative. At the same time, all the intermediate shades between black and white are reproduced with corresponding but reversed density.

The light passes through the negative on to the paper which has been placed just behind it, and the darker the part of the negative so much the less light is prevented getting through the plate or on to the paper. There is thus a reversal of light and shade, and a positive is produced with all its gradation corresponding with nature.

After the paper has been sufficiently printed, it is removed from the printing frame, and is ready to be placed in certain chemical solutions, which will now cause it to assume a more pleasing colour, and will render it permanent.

After the paper has been finally washed in water it is allowed to dry, and is afterwards ready for mounting. This is usually done by pasting it carefully on specially-cut mounts.

DEVELOPMENT

The development must take place in the dark room, and the red lamp mentioned before is the only light permissible.

The operator should be provided with two dishes, of a size corresponding to the plates used.

After the exposure has been made, the beginner will perhaps imagine that the appearance of the plate will be different to what it was when the plate was put in the dark slide. In reality, however, no visible change will have taken place.

There are many different formulas that can be used, and each plate-maker, as a rule, gives the one to be

used which is most suitable to his plates.

Developers can be bought ready made at chemists and photography dealers. The Pyro solution is the most effective, although Metol and Hydroquinone have great claims to popularity by reason of the fact that they can also be used for developing bromide prints, which the staining properties of Pyro will not permit.

The separate Stock Solutions will keep good for a long time if kept in stoppered bottles.

Having mixed the solution in the measuring glass, take the plate from the dark side and put it in dish with the film side upwards. The solution should then be poured evenly and quickly over the plate so as to avoid air bubbles. The bath should flood the plate at once.

The dish should then be slowly rocked, so that the developer may always be on the move.

In about one minute the plate, which was formerly perfectly white in appearance, begins to assume a greyish tint at certain places, and after some little time the delineation of the subject which has been photographed begins to show clearly on the plate, which assumes now a darker tint in various places.

Rocking should be continued for several minutes until the plate has reached its full strength. It is rather difficult to judge when the development should be stopped. As a rule, grey shadows ought to appear at the back of the plate—that is to say, the glass side. When those shadows appear pretty plainly, it is time to stop the development; and the plate, after having been washed in cold water for a few seconds, should be immersed in a dish which contains the following fixing solution:

Hypo-sulphite of Soda 3 oz.
Water 10 "

Fix for five minutes after the milkiness visible at the back of the plate has totally disappeared.

The photographer should not be in too great a hurry to withdraw the plate from the fixing solution, as it does not matter if it be left in a little

too long, whereas if it be taken out before being completely fixed the plate will be spoilt and fade in a few weeks. When fixing is completed, the plate is no longer sensitive, and may be taken to the light. It should be placed in a bath or tank for at least 30 minutes if the water be continuously running, or for two hours if the water be merely changed from time to time. In every one of these operations it is an *absolute necessity* that the dishes be kept scrupulously clean, and that the fingers be not contaminated with hypo before or during development. In fact, a good practice is to keep the hypo or fixing dish in some corner where there is no chance of coming into contact with it excepting when required. If a drop of the hypo solution were to get into the developing dish during or before development, the plate would no longer develop.

In every operation the plate should be put in the dishes and into the water with the film side upwards.

When the plate has been thoroughly washed, it is taken out of the water and allowed to dry. To do this, it may be placed in a rack or merely tilted on a shelf against a wall so as to allow all the water to drain off. Artificial heat should not be applied, and the plate should be allowed to dry naturally; but if the operator for some reason or other be in a great hurry to dry the plate, it may be soaked in some methylated spirit for five minutes and afterwards withdrawn. It will then dry in a very short time. This method, however, should be sparingly resorted to.

If the image appears in less time than a minute the plate is *over-exposed*, and six or seven drops of the following solution, which must always be kept in readiness, should be poured in the measuring glass, and the developing solution poured back from the developing dish into the measuring glass again.

Bromide of Potassium . . . 10 grains.
Water 2 oz.

The solution, which now contains a little more bromide, should be poured over the plate again, and the rocking started once more as in the first instance, but development should be

pushed much farther than for a correctly exposed plate. The process is then continued in the same way.

If the image takes more than a minute to appear, the plate is *under-exposed*, and the developer should be poured back into the measuring glass, to which should be added an equal bulk of water. Pour now over the plate and proceed as before, giving plenty of time.

The edges of the negative should appear perfectly clear. If they are not transparent, light has probably reached the plate in some way or other, either before or after exposure. The plate is then what is technically called "fogged." Either the lamp or the camera is not safe, and should be tested over again. Sometimes, however, prolonged development or want of bromide in the developing solution is a cause of fogging.

PRINTING

There is a great variety of sensitised papers. There are some that are glossy, some that are matt, some that give beautiful black tints like etchings. The amateur should not attempt several methods of printing, and should at first remain faithful to one type of paper, one that will give him no occasion to pull his hair out in despair, or ruin him in attempts or failures. The paper he should work with at first is of the class known as printing-out or gelatino-chloride paper. It is usually sold in packets cut to size, or in sheets, which the photographer cuts up, as he may require. Many lovely and various tones are obtainable with this paper. The photographer should buy a printing-frame of a size to fit his plates. When the plate has been dried and is ready for printing, it should be placed in the printing-frame with the glass side outwards—i.e., the glass side resting on the rebate of the frame.

Next to the film side of the plate a piece of paper is placed, the sensitised face of the paper couching the film side of the plate. The printing frame is closed by fastening the springs at back and is then ready for exposure to light.

If the negative be very strong in contrast—that is, black and white—the frame should be placed in the sun,

but otherwise it is preferable not to allow the sun's rays to act directly upon it. If the negative be thin, i.e. lack of contrast, it should be printed in the shade, or a ground glass should be placed on the top of the frame. The paper need not be put in the frame in the dark, but in subdued light. The time taken in printing from a negative varies considerably. It may be done in ten minutes, and will sometimes require as many hours, or more, according to the intensity of the light and the density of the negative.

It is necessary to print a little darker than the finished picture should appear, as it loses strength in the subsequent solutions used. The print should be examined by releasing one spring, and raising half of the paper, the other half of which is held tight by another spring. When the print is deep enough, both springs are undone, and the paper withdrawn. It is then allowed to soak in water (preferably running) for about seven or eight minutes. If running water be unobtainable, the water should be changed several times until all the milkiness has disappeared, and the last bath remains perfectly clear. The print is then immersed in a solution composed of:

Sulphocyanide of Ammonium	30 grains.
Gold Chloride	2 "
Distilled Water	20 oz."

The colour of the print will then begin to alter, and pass through various shades. The toning should be carried on a little further than the tone required in the finished print.

The beginner will find it rather difficult to judge when to stop toning, just as he had probably found some difficulty in knowing when to stop the development of the plate. A little practice, however, will soon put him right. When the toning is complete, the print is washed for ~~four~~ minutes in water, and is then fixed in a solution composed of 3 ozs. of hypo and 20 ozs. of water.

The print should remain in the hypo for at least twelve minutes, and preferably a quarter of an hour, so as to ensure complete fixing. The print otherwise will fade in course of time.

After fixing is complete, wash the print in running water for one hour.

POULTRY KEEPING

SELECTION OF BREEDS.

The prospective fowl-keeper must take care to select a breed to suit his accommodation and requirements. Some breeds are particularly good layers; others particularly good for table; some require large dry runs to do well; others will stand confinement and, in some degree, damp.

If he has good dry runs, and wishes to breed poultry for table, he will probably select some such breed as Dorkings, Houdans, Game, Indian Game, etc. If for eggs alone, Minorcas, Wyandottes, Orpingtons, Hamburgs, Polish, Spanish, Leghorns. If for both purposes, few breeds are better than Brahmas, or Langshans, and Brahmas crossed with one or other of the above breeds. For table purposes no doubt first crosses are best; some splendid results are so obtained. If a smaller bird of high quality is preferred, few crosses can surpass Game, or old English Game cocks crossed with Dorkings, or Brahmas. If a larger bird be required, the cross of a Dorking cock with dark Brahma hens will produce a magnificent table fowl, and of fine quality. Langshans are also fine table birds, and would, no doubt, answer well for crossing with Game or Dorkings.

If his object is to exhibit, and breed his own winners, he will probably consider only one point; namely, which breed he most admires of all those he sees at the shows, and will purchase stock of that variety to begin upon. Let him not be deluded by the foolish old saying as to the advisability of buying "unrelated birds." For mere farm-yard purposes this may answer well, as greater vigour is probably obtained in this way. But for breeding for show purposes, and to establish a yard which may be trusted to breed true, such a plan is fatal. The produce of unrelated birds may be relied on with fair certainty to "splash" in various directions; that is, the young ones, instead of resembling the parents in

their good qualities, will often be not only most unlike their parents but also most unlike among themselves. Nor in many breeds is it of any use to simply buy the best show cock and the best show hens available. In the dark Brahma and in many other breeds it is necessary to have cock-breeding pens to produce the cocks and cockerels for show, and pullet-breeding pens to produce the hens and pullets for the same purpose.* The cock-breeding hens and pullets thus being only available for breeding, and so also the pullet-bred cockerels and cocks.

In any case, let him take care that he begins with fairly young birds—that is, not more than two years old. Two-year-old hens and a cockerel of the year is, perhaps, best; next best, a two-year-old cock and pullets.

Here it may be well to define what is meant by the term cockerel and pullet, as distinct from cock and hen.

For show purposes, young birds are properly called cockerels and pullets during the year in which they are hatched. But from a breeding point of view, for a purchaser, they are often defined thus: a cockerel is a young cock which has never moulted through completely, after having attained his full chicken feather, and is not in his full adult plumage.

The same definition may be used of a pullet as distinct from a hen. But in hot seasons it sometimes happens that early chickens moult right through, even when seven or eight months old; these must be regarded as still cockerels and pullets; therefore it may be well to add to the above definition, "a cockerel is a 'young cock,' and is for show purposes called 'a cockerel' during that year only in which he was hatched." For breeding purposes, however, a young cock counts as a cockerel until he goes into his adult moult in the summer or autumn of the year following that in which he was hatched.

Hence it is obvious that a bird hatched in November of one year cannot be shown in the cockerel classes of the following year without fraud, though he may still be less than one year old, unless the schedule clearly specifies that the class is for "cockerels hatched during the previous year," which is done in some spring shows, and is quite intelligible and reasonable.

ACCOMMODATION

The would-be chicken-keeper may have every opportunity and advantage for carrying on his hobby—unlimited dry grass runs, shrubberies and trees for shade, a running brook for fresh cool water, strong and handsome buildings for his fowls, plenty of persons in his pay to look after the birds, keep them clean, collect the eggs, etc., or he may have few or none of these advantages. Though living in the country he may have but a small yard or a garden, of which he has to take a strip for his fowls; he may have to put up a wattled hurdle for shade; to house them in an old stable, or in a cheaply run up house of old boards; in an old shed, an old railway carriage, or even an old omnibus; and yet do well with his birds, perhaps beating his richer neighbour, who does not, or cannot, give the same amount of personal attention to his hobby as the poorer man, who is always on the spot and makes his poultry his chief personal amusement, to the great gain of his pocket and to the possible loss of the public-house keeper. He may even live in the thick of a great town, his country view limited to a small back yard, and he may be inclined to say to himself that under such circumstances he has little or no chance of success. But it is not so. Even under such circumstances, hundreds—nay, thousands—of persons have kept poultry most successfully; aye, and exhibition poultry, with which they have made a very valuable addition to the family income. In such a yard build a lean-to house in one corner, so getting two sides of it contributed by the garden wall. Let it, if possible, be a corner facing south, or south-east or even south-west—not north-east, at any rate. Make the side and end of the house of boards; good

weather boarding is the best, to avoid any draughts. Let the roof have a good fall, and be built of stout weather boarding. Unless frequently tarred, the small birds, and large ones too, will pull felt off for their own nest building. Let the door be in the corner of the house farthest from the wall, and leading into the wired-in run described hereafter. In the door let there be put a slide, which should not go to the very bottom of the door, but some three inches from that—this enables one to have the door strongly made at the bottom, a very important point when that door gets old—and let the door open outwards and rest on a strong sill, some two or three inches deep. Then let the floor of the house be dealt with. If possible, a concrete floor at the bottom, to keep away rats, etc. If not, some chalk mixed with dry soil will make a firm and good bottom, which should be rammed hard, and set as firmly as possible. This floor should reach about up to the bottom of the sill, or a shade above. Then some three inches of dry ashes should be sifted on the floor, and these should be kept regularly raked, and fresh ashes added as required. On the most convenient side of the house should be the nest-boxes; and in most cases they project out of the house, with a flap to cover them, which requires a padlock, and a slide to push up at night and withdraw in the morning, to prevent the birds sleeping in the nest-boxes, which will soon become foul and full of insects if so used. The slide should draw in and out horizontally, not perpendicularly. In front of the house, running beside the wall, should be as large a wired-in run as can be spared. If possible, it should be a fair height, say six feet, to enable a man to go about in it comfortably. If this is not possible, it should be made as nearly six feet as can be managed. Upright posts driven into the ground, and connected with the wall by others taken across either horizontally or sloping like the roof of the house, answer well. Perhaps strong iron rods curved to go right over the top of the run are better, but of course more expensive. Over this, with netting must be, carefully fixed, and it is good

economy to have this fairly strong. The mesh need not be very small, $1\frac{1}{2}$ in. to 2 in. answers well for ordinary purposes, though young chickens cannot be kept in by such large mesh. For a chicken run 1 inch mesh is preferable. There should be a door frame, covered with wire, to match the rest, to give admission to the run; and this wire door should be hung close to the shed, so that both doors are close together. The surface of the wired run should also be covered with either good gravel or sifted ashes. In any case, a handful of fresh gravel, thrown in every day, will be a great help to the birds, as it greatly assists their digestion.

If the birds chosen to keep are either Brahmas or Cochins, perches are not desirable, as these breeds, if the sleeping place is dry, do quite as well, or better, without perches. But if the ground is at all damp, they also should have low perches, to be about fifteen or eighteen inches from the ground. In any case the perch should be of good size and rounded; and, if a pole, should have the bark removed, or it will be a great harbour for insects. An occasional brushing with paraffin will be very useful for this perch; and when time can be spared to lime-wash the house well, with a little Jeyes' Fluid and paraffin added to the limewash, excellent results will follow.

For the lighter breeds perches are necessary, and if care be taken that they are arranged like steps, no one being above another, so that the droppings of birds on a higher perch shall not fall on those below, the more perches the better, as it gives the birds a means of exercising themselves. All ventilation should be at the top, and should be so arranged, by a slide or otherwise, that a great deal of fresh air can be allowed in summer, and a more moderate amount in winter. Even in winter want of fresh air causes the houses to become close and stuffy during the night, and then when the morning air comes to be breathed, colds and chills result, and are put down to the cold outside, whereas the real cause is the heat and foul air inside. "Humans" may take a useful hint from this. One or two small panes of glass should be

let into the house-front on the sunny side. This is of advantage in three ways.

Firstly, light is of great importance for health, a fact often lost sight of by people who apparently try and keep health out of their homes by closely drawn curtains and blinds.

Secondly, it enables the birds to see their way about in the house at day-break, and it is possible to leave them a little food—corn, not soft food—overnight, so that they will have an early meal before their owner need let them out, though if their owner is an early riser, and can feed them between five and six, a hot meal of soft food is preferable to corn left overnight.

Thirdly, for convenience when lime-washing, repairing, etc., when it may be necessary to have light inside, but the door shut. If the roof of the whole run can be boarded over like the house itself it will be a great gain, as the run will be kept dry and will be much more easily kept clean. A piece of guttering to carry off the rain from the roof, which should be conducted to a drain or soft-water barrel, will help to keep the place tidy and dry.

It is advisable not to try and keep too many in such a yard; and if the keeper is going in for egg production he may safely have from six to twelve hens with one cockerel. Let the hens or pullets be early hatched. Buy forward birds about August, such as look likely to lay early, and prefer birds which have a good deal of comb for their breed. Such are likely to give you eggs in the winter, when eggs are scarce and dear, and here is your best chance of a good profit. Feed well, vary the food, but don't let the birds get too fat. A stump of a tree placed in the run for them to fly up and down is a good help to exercise, and therefore to health.

Where movable nest-boxes are used—and next to boxes projecting outside the house they are much to be preferred—they should be taken out of the house each night and placed in the dusting sheds, that the birds may not sleep in them and foul them.

Various forms of movable houses are used, and trade advertisements of such are very common.

MANAGEMENT AND FEEDING.

In fine weather, and throughout the summer, it is very important that the fowls should be let out early, and that when let out they should be fed soon. This is especially important on cold mornings, and in cold weather, as the system soon gets chilled in the morning air after some hours without a meal, in the comparative warmth of the fowl house.

If any of the well-known poultry meals sold by various firms be used, it is best that they should be used diluted with a fair proportion, at least half, of ordinary meal. In that case the process should be as follows. Take the required quantity of the patent meal and half fill a bucket, pour boiling water on it, so as to fill the bucket, and place upon the bucket a board or cover, so as to retain the steam. In a short time the meal will have swelled considerably, when the hot mass should be turned out into the mixing tub and well mixed with the meal to be added, till the whole is of equal consistency, and in a moist *crumbly* condition. If available, good soup in which dogs' meat, etc., has been cooked, is excellent for mixing the soft food, and the meat itself, broken fine and mixed in well, is of great value. Both these are more suited for winter work than for summer, when they are rather too stimulating. If the poultry keeper can pick up, cheaply, parts of a horse which has had to be killed, and use it as above advised for his fowls, he will find it both good for the fowls and economical. A bone with a little of the meat, whether cooked or raw, left on it, and put in the run for the fowls to peck at is also most beneficial.

The maggots from a tallow chandlers are also valuable food for poultry if used in moderation. Barley-meal and ground oats make a splendid meal for fowls, especially if a little middlings be added. Equal parts of each, mixed with boiling water, and mixed rather crumbly, so that it breaks when thrown on the ground and is not sticky, is as good as anything in the meal line.

If well-cooked vegetables, scraps of meat chopped fine, bone-dust, house-scrap of any sorts can be mixed with it, it will be improved. Fowls, like

other creatures, are the better for some variety in their food, which the house-scrap tend to provide.

In summer, with a good run, they need have nothing more than a few scraps at mid-day until the last meal at night, which should always be of whole corn. As a staple food wheat is best. Good barley and oats are a useful change. Maize should be seldom used. It contains too much heating and too little flesh-forming material, and tends to cause unhealthy fat and disease of the liver. Buckwheat in winter is a nice change, and is good as an occasional food for young chickens. In winter the mid-day meal for adult fowls must be increased into a fairly substantial one, as more food is required to keep up the warmth of the bodies, and in winter there is little or no insect food which the birds can pick up for themselves.

At little chopped meat daily, during the winter months, no doubt adds to the number of eggs, and also to the proportion of fertile eggs among those laid, as it takes the place of insects, which are not easy to provide for birds in small town enclosures.

Avoid foul water for the birds, and especially sun-warmed water in the heat of summer. The water vessel should in summer always stand in the shade, but in winter in the sun if there is any.

Some sort of grit is absolutely necessary to the digestion of fowls. A handful of gravel thrown among them daily is excellent; pounded oyster shells are also very good, and in addition provide plenty of lime for the formation of shells. The oyster shells should be baked in the oven, when they will be found much easier to pound up.

Even broken crockery, pounded small, about the size of peas or smaller, has been found very useful by people who could not easily get grit. Road sand answers capitally, and makes a very good floor for the house or run.

Vegetables of some kind daily are most necessary; cooked cabbage, chopped fine and mixed with the food, fresh lettuce leaves, in winter a piece of mangold, a Swede turnip for the birds to peck at, a sod cut from the roadside. All these and others are useful to keep the birds in health.

Of course, in a grass run they are not necessary, though even there change is good.

BREEDING-PENS.

For breeding exhibition poultry, careful mating, namely, careful selection of the cock and his mates, to correct the faults on the one side by the excellences of the other, or at any rate not to "breed in" to a bad fault is necessary. And to get strong chickens it is desirable that an excessive number of hens should not be run with the cock. If eggs alone be the object it does not matter, as the question whether the egg would have hatched into a strong or a weakly chick matters little to either the vender or eater of the egg. But for rearing good stock, this question is of the greatest importance.

And in the first place it may be pointed out that in the cold weather birds are not so fertile as in the warmer months, and that as a rule cockerels are far more fertile than cocks. Also the heavy breeds, such as Brahmas, Cochins, Dorkings, Langshans, etc., should not have so many hens in one pen as the lighter breeds, such as Hamburgs, Minorcas, Wyandottes, Leghorns. Hence it follows that in the early part of the season it is most unwise to overcrowd the breeding-pens.

For heavy breeds:—

(1) For a cockerel: till end of February, 3 hens; then increase to 4 or 5.

(2) For a once moulted cock: early, 2 hens; later, 3 or 4.

(3) For an old cock: early, 1 hen only; later, 2 to 3.

For the lighter breeds:—

(1) Cockerel: early, 4 or 5 hens; later, 6 to 9.

(2) Cock: once moulted, early, 3 or 4 hens; later, 5 to 7.

(3) Old cock: early, 2 hens; later, 4 or 5.

These numbers are only given as suggestions and approximate. The individual birds vary so much that observation will at times give reason to change the numbers. If the hens are observed to be losing their feathers on back or sides, it is generally wise to add another hen or two. Fresh birds added should always be placed in the pen after dark. There is less likelihood

of a severe fight when birds wake up together in the morning.

SETTING AND HATCHING.

For setting hens detached boxes, which can be easily moved, lime-washed, and generally kept clean, are better than fixed rows of nests, in the chinks and joints of which insects are likely to congregate. Use empty boxes, such as orange boxes, divided into three parts (or if small into two parts) by wooden partitions. The top should be removable, and should allow for plenty of ventilation. The fronts should take on and off, so that the sitting hen can be shut in, and daily let off for a quarter of an hour to feed. If let off morning and evening, it will be all the better.

Each division should be large enough for a large hen, and deep enough to allow of a good deal of ashes and straw for the nest, and a good air space between the hen's back and the top of the box. At the bottom put a good lot of *finely* sifted moist sand or cinder ashes. If not finely sifted, as the incubation goes on, pieces of hard material are likely to work through to the eggs, and if the hen then treads on an egg which touches one of these bits of stone or coal, the chances are that the egg is broken.

On the top of the ashes, which should be scooped into the form of a nest, add plenty of good straw, and on that, especially in cold weather, a little hay. Then a few china eggs should be put in the nest, and *at night* the broody hen should be placed on the nest and shut in. In a few hours, from twelve to twenty-four, it will be seen whether the hen intends to sit quietly. The real eggs should by no means be put under her till she is steady and reconciled to her nest. Then, at night again, the china eggs should be quietly removed, and the real ones substituted. It is a mistake to put too many valuable eggs under a hen, especially in severe weather, when an egg, if pushed out from under the hen, soon gets chilled. In winter nine to eleven eggs are enough, later on thirteen may not be too many, and in very hot weather a large hen may be trusted with even fifteen eggs. It is a good plan to sprinkle a little pyrethrum powder under the hen's wings and

about her back and fluff before setting her, and again when she hatches out before putting her in a coop with her chicks. The eggs should be carefully tested by candle light when they have been sat upon for a few days. Some can test earlier, but for most people the seventh or eighth evening will be early enough. All clear eggs should be removed, and can be used for puddings, etc., for which purposes they are excellent. The clear eggs can be seen through when held before a candle, much the same as a freshly laid egg. The fertile eggs will be opaque, or clouded, and should be carefully replaced without shaking. The lessened number of eggs is more handy for the hen on the nest, the eggs get more certain warmth, and are less likely to be pushed out into the cold.

Some prefer to use artificial incubation, and it no doubt answers well for those who will give ordinary care to it.

The incubator should be placed on a *firm* stand or table, in a well-ventilated place, free from draughts. The thermometer should be tested for a few hours before the eggs are placed in it, and if steady at from 102 to 104 degrees the eggs may safely be put in. For incubators it is very important that the eggs should be fairly fresh. If possible no eggs should have been laid more than a week or ten days before they are placed in an incubator. They should be turned daily, though perhaps not necessarily turned right round. They should be moved to vary the positions in the drawer. Thus those in the centre should be placed at the outside, and vice versa. The drawer should be left out for some little time morning and evening to air the eggs; the neglect of this is most injurious, and there is no doubt that plenty of fresh air is of great importance if strong chickens are to be obtained. In winter, and on cold days especially, when spring east winds are blowing, care must be taken not to leave the eggs out too long, or the germs may get chilled. In warm weather a quarter of an hour is not too long, especially when the eggs are due to hatch in a few days.

It is important to avoid sudden shocks, jars, noises, etc. The heat should be kept up to 103 up to the

sixteenth day, afterwards reducing it to 101 degrees. And airing extended when near hatching even up to one and a half hours at a time. Of course the avoidance of draughts is absolutely necessary when the eggs are out for an airing. To avoid this, cover the eggs with porous sacking or some such material, and allow the eggs to get almost cold before returning them to the incubator.

The germs are more delicate from the sixth day till about the fifteenth than either before or afterwards. In fact, many cases have occurred in which eggs nearly due to hatch have got apparently quite cold, after even hours of chilling, yet have recovered their warmth and eventually hatched out strong chickens, though a little late. A chicken has been known to hatch out six days after it was due; set under a hen, and, so far as could be discovered, without any reasonable explanation; but as a rule eggs overdue two days contain dead chicks.

It is very important that a sufficient amount of moisture should be given, whether the hatching be by incubator or hen, especially a day or two before the chicks are due. In the case of the incubator the tray underneath gives the opportunity to add a little lukewarm water. When a hen is used, it is desirable in dry weather to pour a little lukewarm water round and upon the nest. The steam will rise when the hen goes on again, and will keep the skin inside the shell fairly moist. If this skin gets really dry the chicks cannot penetrate it, or if they do succeed so far, it will adhere to them, prevent them from turning round inside the egg, and thus prevent them from chipping enough of the shell to get out. The chicks usually emerge from the large end, where the air bubble is, but some are turned round, yet succeed in hatching from the narrow end.

The chick absorbs the yolk, which has been kept in reserve for it all through the process of incubation, just before it hatches. Some chip and get clear before they have done so; these almost always die, but if not quite out a few succeed in absorbing it at the last moment.

Eggs a day overdue should be

tested by floating them in a vessel of lukewarm water—not hot, but just so warm as to feel comfortable to the hand. If allowed to become quite still on the surface of the water, the live chickens will cause the eggs to give odd little twitches or jerks, and these are likely to hatch. Those in which no movement can be seen are usually dead, or so weak that they would not hatch.

It used to be said that if it became necessary to help a chicken out, and in the process it bled, the loss of blood was fatal to it. This is not so.

It is best to hold the greater part of the egg in warm water while helping the chick, taking care to keep the head above water. If the head, neck, and shoulders can be got fairly clear, the chick will generally struggle and help the operation by its own efforts.

COOPS, FOOD, AND REARING, ETC.

When the chicks are hatched, they must either be placed in coops, with the hens which have hatched them, or have hatched others, or under the contrivances which are called artificial mothers. This should not be done till they are twenty-four hours old, as it is necessary that they should get thoroughly dry, either in the nest or in the drying-box of the incubator before being exposed to the fresh air and risks of chill. During this period they need no food, as they have the yolk—the most nourishing and digestible food possible—to sustain them for the first twenty-four hours.

When first put out they should have a meal of some wholesome and digestible food. For this purpose dry bread-crumbs is strongly recommended, mixed with a little finely chopped hard-boiled egg. Care must be taken to only give chickens as much as they will eat up clean. Sour food left lying about means disease and death. A little finely chopped lean meat every day is most beneficial, and if they cannot run to grass for themselves, a fresh sod by the coop is excellent.

Young chickens should have alternately soft and hard food, but always hard food for the last meal, which

should be given as late as there is light for them to see to eat. At first, five meals a day are not too many, but gradually they should be reduced to four, then to three, which is the best number when they get nearly grown up. For hard food, for the first week, "grits" and split wheat, but they must not be allowed to overeat themselves with wheat, which they will sometimes do. After a week drop the grits and use split wheat only, till they are old enough to have whole wheat. Wheat is preferable to all other kinds of grain. The chickens should be let out as soon after daylight as possible, and fed with soft food directly they are out, or at any rate within a quarter of an hour.

Take care that the water is quite fresh, and the drinking vessels kept quite clean. Above all, beware of sun-warmed water in the hot weather. As chickens which have been shut in all night are usually thirsty when first let out, it is important that the attendant, or whoever lets them out, should take round a can of fresh water, and, having thrown away the old stale water in the vessels, fill them afresh. For young chickens use flower-pot saucers glazed inside. These keep very clean, and are not expensive.

It is essential that a coop should be watertight above and below; should have a front for night time to protect the chickens from rats, weasels, cats, etc., and plenty of ventilation without draught.

It must also have a strong, movable tray, fitting inside to form a floor to the coop, which should be covered with fine sand, ashes, or gravel. This can be daily raked over, to keep the coop clean and keep down insects. Before putting a hen in a coop with chickens, sprinkle her well with pyrethrum powder, especially under the wings and all the lower fluffy parts. This may be repeated when necessary, and the chicks may also be treated in similar fashion. They will not grow if tormented and partly devoured by insects; and lice are even more trouble than fleas, and more often unnoticed. Examine carefully the young chicks at intervals, and especially under wings and at back of head. A good heap of dry

soil, gravel, or ashes for them to run to and dust in will be of great service.

If artificial mothers are used, care must be taken that the chicks do not get entangled in the flannel, or whatever is used as a substitute for feathers. In the early days a good many chicks got hung up in this way, but most mothers are now arranged to avoid this. It is as well to say, keep the heat in the mother too low rather than too high. Excessive heat means chills and deaths. Plenty of nice, small gravel thrown down for the chickens in the run is most important, giving them occupation and helping them to digest their food.

Again, do not let access to green food of some sort be forgotten, and fresh, clean water. See that the floor of the mother is cleaned every day, and thoroughly. Look out for insects, and if you find any, act at once. Paint woodwork with paraffin, and sprinkle pyrethrum powder on chicks, floor, and wherever necessary. If the chicks seem to have a difficulty in growing their feathers, a little flowers of sulphur mixed with the food, say twice a week, is very beneficial. It is also good for adult birds when moulting, to help the new feathers. For leg-weakness, iron in the water and bone-meal in the food are excellent.

FATTENING, KILLING, ETC.

The flesh of a healthy fowl, which has lived a free, out-of-door life till the last moment, is both better in flavour and more wholesome than that of one which has been kept in confinement and fed, perhaps compulsorily, into an unhealthy condition of obesity. And if well fed, and killed at the right time, such naturally fed birds will be quite plump enough. Pheasants and partridges come fairly plump to table, even when left quite free to find their own living.

Occasionally it is advisable to artificially increase the flesh of birds to be killed for one's own table. In that case, if a few birds are confined in a clean, warm pen or run, and fed on as much soft food as they will eat—say three or four times a day, care being taken to feed very early in the morning and as late as may be at night—

the birds will gain in weight, and will eat well. It often happens that for the first few days no great increase of weight is to be noticed; occasionally for a day or two a loss of weight occurs, owing probably to fretting, but after the first few days the gain in weight should be very noticeable.

But where special fattening for market is desirable, a few of the ordinary rules or principles may be given.

Firstly, to fatten successfully, the birds should be kept in the dark, or, at any rate, in a dim light, which will encourage them to rest, an essential to the laying on of flesh.

The fattening pen, whatever sort be used, must be kept scrupulously clean, and be well lime-washed beforehand, and, if necessary, at intervals, with ordinary lime-wash, to which a little size and a little Jeyes' Fluid or petroleum has been added, the former for choice.

The birds should not be fed at all till they have been in the fattening pen some few hours, long enough to get hungry, and while they are being fattened must have only soft food, no hard corn being admissible. The floor of the pen should be made of strong laths or strips of wood, so that all manure may drop through and the pen thus remain clean. The pen should have a movable front, reaching nearly to the top, so that when it is fastened up the birds are almost in the dark. The fixed front behind this movable one should be barred; either strips of wood, or rods of wire, fastened vertically.

For fattening foods, no doubt, the best are ground oats, buckwheat-meal, maize-meal, and whole wheat-meal. At any rate, the buckwheat-meal should form an item in the process. Some add suet and other fatty substances. These, no doubt, contribute to the fat of the birds, but not so much to the flesh, and in *fattening fowls*, as it is called, the true object is not to lay on *fat*, but to develop plenty of good, wholesome flesh. Take care that no stale food is left; this applies to the feeding of all animals or birds, but particularly to young chickens and fattened fowls, as soft food left about turns sour, is injurious when eaten, and gives the birds a distaste for food. No care is too

great to take to scrape away or remove any soft food left over. The water must be fresh and clean.

It is not wise to try and fatten too many fowls in one coop. For ordinary purposes two or three should be cooped together, as birds are generally more quiet when they have companions to which they are used. It would not be wise to pen together birds which are strangers to each other; the first result would be probably a free fight, which would discount the effect of several days' fattening. If, however, it is necessary to put strange birds together, it is best, not only for fattening purposes but at all times, to make the change in the evening after dark. The birds hear each other, more or less, they wake up finding their neighbours by them, and probably, in the dim early light, in many cases get reconciled to the idea before they can see well enough, or are wide-awake enough to fight.

Again, variety of food is desirable for every one, and for fowls as well as humans. To increase the appetite of the fattening fowl, it is especially necessary. The longest period for fattening a fowl is three weeks. It will not lay on so much flesh proportionately after that time, and the confinement and the unnatural system of feeding will begin to tell on the bird after three weeks.

If milk is plentiful, whether skimmed or new, it is a very valuable addition to the food, which should be mixed with hot milk, instead of hot water.

One of the most unpleasant parts of keeping poultry is the necessity for killing.

The best way of killing a fowl, if one has a strong wrist, is to take the head of the fowl in the right hand, the neck in the left, and with a sudden wrench backwards of the right hand holding the head, to dislocate the neck. If this cannot be managed, the operator should tie the legs and wings of the fowl together, and with a sharp chopper chop the head clean off, chopping of course on a solid block. The tying is recommended because even after the head is off the muscular action is considerable, though no doubt without any sensation remaining in the bird.

The slow tortures which some other methods involve are a conclusive objection; a severe blow with a stout stick on the back of the head, if well managed, is a good plan, as if properly dealt it should cause instant insensibility. Plucking should be done while the bird is still warm, but not, as in some recent horrible cases, while the bird is still *alive*! The bird should be left till it has ceased to quiver, so that there can be no doubt of its death, and then the sooner it is plucked the better, and if necessary singed. Those who like the effect can then place it between two boards "to keep the breast down" as it is called. Some beat the breast bone down for the same purpose. For market it may be well to concede so much to custom.

Some recommend that the bird should, when plucked, be at once plunged into boiling water, to improve its appearance. There is no objection to this, though it is only its appearance that will be improved.

If the poultry keeper also keeps pigs, he will probably give them the entrails from the fowls he kills. There is no doubt piggy likes them, and they are nourishing food which do no harm to the pig.

The feathers are a valuable item in poultry keeping, if carefully kept and properly treated. The process is fairly simple and much as follows. Avoiding all dirty feathers, take all the small feathers from back, breast and fluff, cut the hard ends off, and then at night put them in the kitchen oven, where they remain and are thoroughly baked by the morning. They are then collected into a bag, and kept dry, until one has enough for making a pillow, bolster, or feather bed. If the feathers are collected for market they should be divided into classes—ducks' feathers apart from fowls' feathers, white apart from coloured, the scrippings from the larger feathers apart from the smaller and more fluffy feathers. They should be kept in muslin or canvas bags which are exposed by their open texture to the action of the air. If hung up in the air on dry, warm days it will help to keep them sweet and dry.

DISEASES.

It is not possible to go fully into the many diseases which may befall the poultry fancier's live stock. It must suffice here to take a few of his probable worries and suggest how he may best deal with them.

Egg-bound.—In mild cases a dose of castor oil or Epsom salts answers the purpose. If that does not answer shortly, chop some groundsel, make it with butter into a big pill, and administer. A feather dipped in sweet or linseed oil and passed up the vent and round the fore part of the egg often succeeds. Great care in handling must be exercised, to avoid breaking the egg inside the hen. Olive oil injected with a small syringe is a further method. The bird should be kept very quiet for a day or two, and fed on soft, non-stimulating food.

Egg-eating.—This is rather a vice than a disease, and very troublesome to cure. One of the best remedies is obtained by leaving rotten eggs, which have been well sat on, about at the disposal of the egg-eater. If the egg-eater is very valuable and all plans fail, a nest box contrived so that a new-laid egg at once rolls under a sheltering cover is good. The difficulty is that all hens won't use such elaborate nest boxes.

Indigestion.—Often caused by want of proper grit and gravel to aid digestion. Too much soft food and too little hard corn also weakens the action of the gizzard—or the bird may be generally "below the mark," or the liver sluggish, or have had too little exercise. In most cases of the sort great thirst is present, and fowls will fill their crops with water, sometimes to such an extent that the crop never properly contracts again. Give, therefore, only a moderate amount of water after each meal, leaving none for the bird to drink freely from. Empty the crop, and give first half a compound rhubarb pill and half a compound blue pill, together—the ordinary pills as sold by chemists. Feed moderately on soft food only, and a little lean meat, cooked and chopped fine. After a day or two give tonic, half teaspoonful each Parrish's Chemical Food and cod liver oil twice a day. A digestive pill, such as is prescribed for humans, cut in half

and given twice a day is good. It should contain rhubarb, pepsine porci, aloes, and nux vomica. Most chemists keep such in stock. Exercise and plenty of grit and gravel are the main things to remember for future treatment.

Insects.—Fowls are tormented with fleas, lice, and ticks. Frequent powdering of the birds with pyrethrum powder, Jeyes' powder sprinkled on the group of the sleeping places, lime-washing the houses and perches, especially any chinks or cracks, with ordinary limewash, to which a little size and one part in sixty of Jeyes' Fluid have been added, will greatly help to keep these pests down. Painting the perches with one part of paraffin and three parts water is also excellent. Good heaps of sand or ashes for dusting help the birds to clean themselves. A little sweet oil rubbed on the back of the head is also good. Insects, or their eggs, are often brought in with the straw. Old straw should be buried or burnt, and cleanliness generally attended to.

Moulting.—Though not a disease in itself, it often leads to weakness and illness. If the fowls can't get rid of their feathers they should be helped, the dead feather being pulled out to make room for the new ones. The head feathers seem often a special difficulty. Tonics, such as the Parrish and cod liver oil recommended elsewhere for indigestion, or a little iron in the water, nourishing food, and plenty of green food are the best helps. If birds get very thin in moult, an extra meal or a tonic is advisable, as the strain on the system of throwing off the old feathers and growing the new is very heavy. A little extra cooked meat daily during moult is of great service, and if during the latter part of the moulting stage the new feathers seem backward in growing it is well to mix a little flowers of sulphur with the soft food about twice a week. Sulphur is no doubt of great assistance for producing the new feathers.

PROFESSIONS AND OCCUPATIONS

WHEN a boy has a strongly-expressed preference for a particular profession, the parents will be well advised to allow him to prepare for it, assuming, in the first place, that they are in a position to bear the necessary preliminary expense and, in the second, that the child has the vigour of constitution, the apparent mental capacity and the demeanour and disposition that make for respect and amiability, if not for popularity. In those cases, unfortunately too numerous, in which a bent is lacking, responsibility for making a choice must rest upon the parents, who should be guided by a thorough consideration of all the foregoing conditions and of the idiosyncrasies (if any) of their boy or girl. With a view to assist in their selection, we supply the following general notes concerning the leading careers. Details as to examinations, fees, the cost of board, lodging and equipment, can always be readily obtained on application to the authorities, or headquarters, in the profession that has been selected.

ACCOUNTANCY

The main qualities needed for the profession of an accountant are aptitude at figures, method in analysing and displaying accounts, shrewdness in dealing with explanations of the problems that may arise in connexion with an audit—which is by no means the casual office it formerly was,—tact and address in cultivating an extensive acquaintance with business houses, and a careful knowledge (always kept up to date) of every branch of commercial law. Many great companies maintain an accountants' department—such as insurance

offices, banks, the Navy and others—in which the posts usually carry a much higher salary than do those in the ordinary departments. A boy cannot be articled with a chartered accountant until he is sixteen years old, and as every firm is permitted to engage not more than two such pupils, the desirable course, where the means sanction it, is for parents to article their son when he leaves school with a good firm doing a large business. The premium varies, and may run to as much as five hundred guineas, but in an office of high reputation the pupil is certain to acquire a wider and more diversified experience than he would obtain in a smaller office. After an apprenticeship of five years, he will be entitled to enter for the first examination for the Associateship of the Institute of Chartered Accountants (A.C.A.). In two and a half years he will be able to go up for the Intermediate, and after the lapse of two more years, for the final examination. Fellowship (F.C.A.) follows, without further examination, after several years spent in active practice of his vocation.

ARMY.

It is commonly supposed that the Army offers a more desirable career, even to the ranker, than it once did. Candidates for commissions, however, should be possessed of a private income, for a certain number of years at least, if not permanently. This varies from an absolute minimum of £100 per annum for the infantry to £200 for the cavalry, and even to £500 for a few "swagger" regiments. It is before all things essential that the boy should be thoroughly examined

by the doctor to see that he is sound not only in wind and limb, but also in height, girth and other points, while the family history in respect of constitutional disease should be beyond suspicion. Since physique and stamina count for so much, the lad who has figured to advantage in the playing field, as well as in his ordinary class-work, is exceptionally fitted, to start with, for a military career. From school he will proceed to the Royal Military Academy at Woolwich ("the Shop"), for the Engineers and Artillery, and to the Royal Military College at Sandhurst for the Cavalry and Infantry. Between the ages of 17 and 19½ years he will present himself for the Qualifying—unless* he* hold certain exempting certificates—and Competitive Examinations, which passed, he will enter upon the special study required for a commission. He has, within limits, a certain option as to the arm of the service in which he would wish to act, but it would scarcely be worth his while to try for Woolwich, unless he were decidedly strong in higher mathematics. In the course of two years he will be in sight of his final, and should he pass, he will be gazetted in the order of merit. Some choice of corps is customarily afforded. Promotion from the ranks is sufficiently common to warrant a youth, seriously bent on the career and otherwise without the necessary means, entering the Army. He must possess certain physical qualifications, be steady, diligent, fond of the work of his calling and show tact and skill in the handling of men. Nor should he neglect the many opportunities presented of improving his mind, for he will be required to pass an educational test, the severity of which, however, need not alarm the studiously disposed.

ARTIST

The boy or girl who does well in the drawing classes at school and is, moreover, in the habit—consciously or not—of covering every sheet of blank paper with sketches will, more likely than not, "want to be an artist." However, so far as emoluments go, it is not the career it used to be, and the artist's lot is commonly hard, if happy.

The student will spend two or three years at an accredited school, drawing from life—in London, Heatherley's, the Slade and Lambeth are very acceptable—and then, should his work pass the examination, enter the Royal Academy Schools in London for three or five years, where tuition is partly free, and conducted under the supervision of Academicians; or go to the Beaux Arts, or Julian's, or some other far-famed school in Paris, or to one of the German or Italian schools. Here he may attend a year or two (longer if he chooses, of course), when he will be equipped for his life-work. For a few years he will do well to supplement whatever income he may derive from work in oil, or water-colour, or both, by black and white drawings for books, magazines and other periodicals. Should he possess facility of style and a readiness to adapt himself to the requirements of editors, he may easily earn more money in this mode than in the higher branches of his craft. If he has a fine sense of colour and possess the power of invention, not without a turn for humour, he should not neglect the lucrative field presented by posters, for which there is, in these days of keen competition and advertising enterprise, a steady demand.

BARRISTER

It is understood that the bar is one of the professions that is overstocked. Yet a clear-headed, sharp-witted junior, gifted with the knack of getting at the heart of a problem and sticking to it, and likely to make a shrewd cross-examiner, can always earn a living, the more readily should he possess a more or less extensive acquaintance among solicitors, by whom barristers are briefed. He may enter one of the Inns of Court in London either straight from the University or after private study. The Middle and Inner Temples are preferred for Common Law, Lincoln's Inn and Gray's Inn for Chancery. Having passed the preliminary examination, paid his fees and deposited his bond, he will proceed to "eat his dinners." To keep term, as this is called, he must eat not more than six dinners in one term, and as there are four terms to the year and the

routine lasts for three years, he must eat 72 dinners in all. Concurrently he will, if he be well advised attend the lectures at his Inn. He has to pass four examinations, (Roman Law; Constitutional Law; Evidence, Procedure and Criminal Law; and English Law and Equity, including Persons, Real and Personal Property, Conveyancing and Obligations). He cannot present himself until he has kept six terms, but may take the first three subjects separately or at a blow. The fourth subject is the final, having passed which he will be duly "called." Roman Law is exempted under certain conditions, and the number of dinners may be reduced to 36 in the case of members of a University. A newly-fledged barrister usually reads in chambers for a year with a leader, or other well-known barrister, though he is at liberty to divide this period into six months with a Common Law man and six with a Chancery or Equity man, should he desire a close insight into both sides. During the time that he is likely to remain "briefless," he may "devil" for a successful barrister, who will probably, if he is a good fellow, keep his eye upon him. In any case the work is doubly useful, for he is sure to meet with a number of solicitors and to be increasing his knowledge of detail and enlarging his experience.

CHURCH

To enter the ministry as one would enter the Army, or Law, or Medicine, is repugnant to conscience, and though the Church—using the word in its widest sense—is often spoken of as a profession, the service of God presupposes on the part of the student a very distinct predilection, or "call," as it is termed, for the supremely important and responsible duties of the office. In the case of the Church of England it is customary to take the curriculum at Oxford, Cambridge, Durham, or other University, before entering on the more purely theological course of three years at a Divinity College. No man can be ordained a deacon before he is 23 years old or, as a rule, after he is 30. To reach this stage he must have passed the preliminary, or entrance examination for

Holy Orders and the Bishop's examination, the latter of a highly technical sort, dealing with the Old and New Testaments (textual, exegetical and historical), the Thirty-Nine Articles, the Book of Common Prayer, Church History (with special emphasis on the Anglican Church), the Evidences of Christianity, and an ecclesiastical author in the Latin tongue. Having filled the diaconate for a year the candidate will then proceed to the examination—not (quite properly) of so searching a nature—for the priesthood. In the case of Nonconformity, students (who must be at least 16 years old on admission) can attend the colleges of the body to which they belong. The Presbyterians in Scotland, the Congregationalists, Baptists, Methodists, Catholics, Unitarians and Jews all support colleges the professors of which are able theologians and competent teachers. After the ordinary curriculum has been gone through the theological course of three years is entered upon. Accordingly a period of seven years is necessary, on an average, before a man is able to begin his ministerial duties with full authority. To enable poor men of talent who feel the "call" to qualify for the ministry, various institutions have been established that will provide ways and means. Necessitous candidates generally put themselves in communication with a recognized institution or well-known priest, who will supply the necessary information as to how this assistance may be obtained. Candidates must, of course, be prepared to have their claims for help thoroughly sifted.

CIVIL SERVICE

No wonder the Civil Service attracts so many candidates. A living wage to begin with, a certain annual increase of salary—small, perhaps, at first, but growing larger latterly—a liberal (and even more than generous allowance in some branches) grant of holidays, and a substantial pension on retiring; these are features that readily account for the popularity of the service. It is necessary for intending competitors to keep watch on the daily papers for announcements of examinations, or, better still, to apply for full particulars

to the Civil Service Commission, Burlington House, London. On leaving school a boy between the age of 15 and 17 may go up for the next exam. for a Boy Clerkship. This will keep him in more than pocket money and familiarize him with the routine of office work, but, having an eye to promotion to the Second Division (for his employment as a boy clerk ceases altogether at 20), he should attend the evening classes in one of the numerous institutions that make a speciality of coaching for the Civil Service. The age limits for the Second Division are 17 to 20 years. Above this comes the First Division, for which the age of admission is from 22 to 24 years. The examinations grow correspondingly stiffer and some boys may find the services of a crammer indispensable. Young men who pass their exam. may be drafted to the department in which their services are most needed, though they are allowed some degree of option, if they care to risk the delay this may involve. A candidate may sit for the Second Division and the Customs, and, since the one fee covers both, it is often prudent to do so. He may pass in one, while failing in the other; and if he pass in both he may choose in which he will serve. The Customs and Excise present attractions to those who have a liking for an open-air life, but these candidates should certainly be careful livers and have robust constitutions, as they must turn out in all kinds of weather. Before entering for the Indian Civil Service, candidates should be thoroughly overhauled by their family doctor. It is a cruel experience to pass the severe exam. and then be ploughed by the medical man. The Diplomatic Service is practically a close department, since a very influential nomination is imperative and a private income is essential during the earlier stages of employment.

CLERK

To be a clerk is the manifest destiny of all who have no bent, who answer the question what they would like to be by the rather futile "Anything." Their outlook is not too cheerful. Owing to the vast supply of clerks the salaries are kept low. Nevertheless,

there are many opportunities to those who are punctual, methodical, discreet, accurate, who are not mere automatons, but take an interest in the business of their firm, who cultivate a correspondential acquaintance with French, German, Spanish and Italian, who are able to write a well-expressed letter, and who have a working knowledge of typing and shorthand. The entry to a clerkship is easy enough, since every business house of any standing needs clerical assistance. The best openings are to be found in banks, insurance companies, and the counting-houses of the principal wholesale concerns and great manufacturers. An introduction from an influential customer to a director or highly-placed official is necessary in the case of banks, which usually put the applicant through a more or less nominal examination. Often, too, the larger banks prefer lads who have already had some experience of office routine. A clerk who reads up for and passes the examination for the Associateship or Fellowship of the Institute of Actuaries will be almost sure of a strong position on the actuarial staff of an insurance company. The entrance exam. is comparatively simple, but the various stages of the next are highly technical and really searching. The clerical staff of the chief municipalities presents excellent opportunities to well-educated youths. In the case of the London County Council, for example, the career is not far short of the Civil Service in respect of the advantages offered. It is necessary, however, to pass competitive examinations, for boy clerks (up to the age of 17) and for the Second Division (between 18 and 21). The subjects, dates, and places of examination are advertised some time beforehand and it is desirable that boy clerks should, during this period of probation, attend classes at one or other of the institutions that specialize in this type of exam., or at all events read up privately.

DOCTOR

For the medical profession, which is one of the few open to both sexes, a very decided liking is desirable. In

addition to the scientific knowledge and skill essential to the calling, sympathy, a good manner, firmness, fearlessness and promptitude in detecting and reading symptoms aright are indispensable, while those who take up the more purely surgical side must possess an iron nerve, sureness of touch, facility and dexterity. Since doctors cannot call their time their own, being constantly liable to have even their necessary sleep encroached upon, a vigorous constitution and long-suffering disposition are almost imperative. Though attendance on the Art classes at a University is advisable—for a doctor must have culture and taste and be versed in literature and the fine arts—it is not absolutely necessary. A preliminary examination to test general knowledge, however, must be passed by all candidates who are not otherwise exempted. Then comes the four or five years' course in connexion with some well-known medical school. Some schools, like Edinburgh, are famous for their teaching, others, like "Bart.'s" and London Hospitals, for the opportunities afforded for clinical experience. The curriculum embraces four exams., of which the first deals with the more general subjects, like chemistry, physics, pharmacy, biology; the second with anatomy, physiology and *materia medica*; the third with medicine, pathology, therapeutics, medical jurisprudence, public health, surgery and midwifery and women's diseases; and the fourth and last with midwifery (if not taken before), clinical medicine and clinical surgery. The student has to act as dispenser to some chemist convenient to the school for a few months and must undertake midwifery cases before examination in the subject. During a considerable part of his studies he will attend one of the consulting staff of the hospital in his daily round of cases and learn by precept and example what should prove of the utmost value in clinical medicine and surgery. This custom is known as "walking the Hospital," and, as the consulting surgeon may be a man of world-wide reputation, attendance is of final importance. In London most students

take the double qualifications (L.R.C.P. and M.R.C.S.). After he has passed his final, the student will probably spend a year as house surgeon, or doctor to his hospital, or obtain a junior appointment on the staff of a leading infirmary or asylum. Having acquired confidence and experience, he will next address himself seriously to the question of his practice. It is frequently very doubtful policy to buy a practice; often it answers to enter into partnership (junior at first) with an established practitioner; still more frequently it pays in the long run to "spot" a new neighbourhood or district and grow with it.

ENGINEERING

Engineering, as one of the practical professions, appeals to lads who are clever with their hands, are of an inventive turn, fond of applied mathematics and mechanics, good geometrical and mechanical draughtsmen, not averse from hard work and, at any rate during the earlier years, early rising. The profession consists of five branches—mechanical, electrical, civil, mining and gas; to which is sometimes added what is comprehensively called borough or municipal engineering. From school the boy usually goes to a technical college and studies the theory and practice of the branch which he intends to follow, and at the age of 18 enters a well-known "works," where he actively pursues his calling as an ordinary workman, spending six months in each "shop." On the expiry of three years he will have learned the practical side of his business and should then pass into the drawing office for a couple of years. It is disputed whether it is better to attend a technical college before "serving his time" (so to speak), or reverse the process, or spend half his time in the shops and half in college. Really it is a matter of choice, but probably where the last system can be adopted it may prove the best, since practice and theory may then go the more readily hand in hand. Considering the aptitude and ingenuity of Americans in certain branches of engineering, it may be worth while to

spend two years in the United States acquiring something of the methods and practice in vogue in the Republic. The student in mining will, of course, take up geology and mineralogy and a working knowledge of French, German and Spanish is to be recommended in these days of company promoting in all parts of the world. Every mining company of any consequence requires the report and often the permanent service of an expert engineer.

JOURNALISM

Like the poet, the journalist is born, not made. The boy or girl who fancies this career ought to have a good all-round education and read up the best authors privately, not excluding the best novelists and something more serious in the way of philosophy, logic, sociology, political economy and local government. There is less occasion for specializing, though art, music, and science present openings in this direction. Women will, of course, be familiar with the details of fashion and follow actively the doings of Society. Though a reporter's career is not what it used to be, fluency in shorthand is a desideratum, since a *verbatim* report is frequently called for, through one of the Press agencies. Keen observation of men and things is essential, and a bright and graphic style should be cultivated. On the other hand, the art of rapid and intelligent condensation is also invaluable, but accuracy must never be sacrificed. Journalism is most usefully approached through experience on a good provincial newspaper, where perhaps in the long run the quality of one's work will tell and may even attract the notice of a London editor. It is wisest for the youth to go through what may appear to him to be drudgery. If he spend a few weeks at case in the composing-room, or learn to operate a type-setting machine, or "read" in the reader's closet for a month or two, his experience will be extremely useful in the sub-editorial or reporter's room, and even in the editorial chair. In the course of his training he will learn the whole art and mystery of "blue

pencilling" and be taught to avoid the shoals, rocks and quicksands of the law of libel.

MUSIC

Music, in a sense, is the most specialized of all the professions. A real love and, one may even say, genius for it must show itself, especially in the case of instrumentalists, from an early age. Should this bent be manifested beyond all question, then the best plan is to place the young instrumentalist under the tuition of the most accomplished teacher whom the means of the parent can secure. His teaching must be backed up by constant practice, running to many hours daily. When the young musician is old enough he should be placed under the care of the masters at one of the recognized colleges at which, after some three years, he may finish off at one of the foreign *conservatoires*. In the case of singing, a somewhat different course must be pursued. Should the quality of the voice be beyond doubt and, therefore, worth cultivating, nothing will be gained by forcing it until the boy or girl is 17 years old. This is not to say that a boy will gain any harm by singing in a choir. On the contrary, the practice and the training will be highly beneficial. But the human organ cannot be worked like an instrument and, therefore, greater moderation and prudence must be shown in the training. Up till the age named the pupil will do well under a private teacher of recognized ability, and then he may be placed with a master at the best musical college. The art of voice production, however, is one that is so seldom scientifically and sympathetically understood and taught that exhaustive inquiries should be resorted to in order to find out who is really an expert teacher. Three years at such an institution may be followed by a further private course under the greatest exponents at home and abroad, and then the vocalist should be ready to embark upon the chosen career.

NAVY

The senior service is open to the lad who lacks means as well as to the son of the rich man. Let us consider the

latter first. The boy must be hardy, smart, amiable, likely to be fond of work and to devote himself to it, prepared to rough it in a give and take fashion, and to love the sea in all its moods. Application to the Board of Admiralty must be made between the ages of 12 years 8 months and 13 years, along with a nomination from the First Lord, or a member of the Board, or one of a few other privileged persons. The boy will then be interviewed by a special committee, and should he be deemed fit, must pass a searching medical examination and a fairly easy qualifying exam.* These passed, he will then proceed to Osborne Naval College for two years, and afterwards to Dartmouth College for another two years. He will next be drafted to a training cruiser for eight months and then be sent as a "middy" on a sea-going battleship. On the expiring of three more years he will go in for his lieutenantancy exam. in seamanship, gunnery, engineering and other subjects. Following the pass he serves a further period of two years as sub-lieutenant and lieutenant. At this stage he must specialize if he mean to specialize at all, taking gunnery, torpedo, engineering, navigation, or other particular branch. Failing this he will continue in the Royal Marine. Besides the executive service there are other departments that attract some, such as the chaplaincy, surgeoncy and accountancy. Lads who lack the means or make up their minds too late to enter as cadets may yet join the Navy, provided they are not above 16 or 17 years old and pass the necessary physical standards and a simple educational test. They will be required to serve for twelve years (18 to 31 years). By assiduity, competence and good conduct it is possible for them to reach commissioned rank.

NURSING

Nursing is a profession for which women are pre-eminently adapted, provided that they have the aptitude and temperament for it; that they are strong and healthy, and that their nervous system is well under control. After attending classes on the subject at evening continuation schools, where

the practical work is taught by trained nurses, and lectures on the nursing of the more common ailments are given by women doctors, the student should then enter a training school for nurses.* Such institutions have been established in connexion with the leading hospitals in the chief cities, and there are, besides, privately-venture schools of good repute. The custom is to apply to the matron for admittance as a boarder or for service as a probationer. The training is thorough, and the novice must be prepared to do her share of the menial work of the wards and sick-rooms (such as dusting, washing-up, tidying and the like) to start with. In addition she will be gradually trained in all the branches of her work and finally be entrusted with the charge of patients under the direct supervision of the house surgeons and physicians. After three years she should be ready to pass her examination as a certificated nurse.* There are constant openings for efficient nurses in hospitals, infirmaries, asylums and workhouses, as well as in the nursing homes of practitioners, specialist and general, in the army and navy, and in midwifery cases. In many instances women have successfully specialized as nurses, studying the requirements of patients who are afflicted with diseases likely to be of long duration and demanding unusual intelligence and care and sympathy. Women will be able to take complete charge of a case by the age of twenty-five years, as a rule, and should not undertake the responsibility earlier, because it is essential that their physical growth should be matured before entering upon duties often of a harassing and exceptionally trying description. Nurses are well paid, and deservedly so, since upon their unselfishness, skill and devotion, the comfort and restoration of patients must largely depend.

SOLICITOR

Though up to a point less anxiety as to livelihood need be felt in this branch of Law than attends that of barrister, in which there is a long period of uncertainty, yet unless parents and family friends can control a good deal of business, a boy has little else to look

forward to in this profession than the post of a managing clerk to a firm of solicitors—some of which, however, are well remunerated—or, more rarely, a clerkship under a municipality, county council, or other public body. Let the boy have a good all-round education till 16 years old. He ought then to be ready to pass the Preliminary exam. of the Law Society. Next he must become for five years articulated clerk to a firm of solicitors (and great care should be taken to ascertain the standing and reputation of the firm, else the premium and stamps may easily be wasted). After twelve months' service he will be entitled to take the not too difficult Intermediate exam., and, on the termination of his articles, he will go up for the Final exam. This, as is only right, is exhaustive, covering conveyancing, the principles of law and procedure obtaining in the various Courts of Justice, ecclesiastical, bankruptcy and criminal law and practice. After he has been admitted a solicitor, the future has to be studied, and the courses usually open are admittance to a partnership, the purchase of a practice, or a clerkship. The first settles itself, the second should only be negotiated after thorough inquiry, and the third is that which most of beginning solicitors necessarily adopt. If the solicitor take care to keep up his law, be a man of scrupulous integrity, cultivate a suave and "taking" manner, be methodical, reticent, punctual and energetic on his client's behalf, it is quite possible—especially should he become intimate with a wide circle of men of business—that he may in time build up a lucrative practice.

TEACHING

Before deciding to allow a son or daughter, and the latter especially, to qualify for this onerous and responsible profession, a parent should obtain the clear sanction of the family doctor, for the drudgery of it—most of which is performed "behind the scenes"—is constant and exacting. But young persons of sound constitution, who have patience and sym-

pathy, and possess the gifts of assimilating knowledge, of imparting it readily, and of "managing" children, may unhesitatingly follow a career, the emoluments of which are certain, if seldom more than moderate, and in which the demand is likely to continue to be distinctly in advance of the supply. The routine of training is composed of comparatively short but well-marked stages, but the first, that of pupil teacher, should not be entered upon until a good, all-round education has been acquired, for with this as foundation the later "grinding is" less arduous. Between the ages of 16 and 18 years most of the pupil teaching work will be finished, and probationers who pass the examination will then be ready for a training college, where they learn the whole theory and practice of teaching. When they have passed the final exam., usually between the ages of 20 and 22 years, they will receive a certificate entitling them to hold any post in an elementary school. Before becoming fully-fledged teachers, however, there are certain privileges in virtue of which, as provisional assistant teachers, student teachers, uncertificated teachers and the like, they may begin to earn a salary whilst continuing their own studies for the full qualification. For teachers in secondary, higher grade, and the public schools the Arts course at a University is undoubtedly an advantage, as more attention is frequently paid to a degree than the degree itself seems to warrant, while for some public school positions Holy Orders are an absolute stipulation. It should not be forgotten that increasing interest is taken in athletics and manly games, and teachers should qualify themselves to participate in and, if necessary, superintend the sports and pastimes of their pupils. Field natural history occasionally offers a preferable open-air means of recreation and, in such circumstances, it devolves upon the teachers to accompany the classes on their botanical, geological, or zoological excursions. This presupposes, on the teacher's part, a more than "bowing acquaintance" with these sciences.

RELIGION

In its highest sense religion implies belief in and worship of the omnipresent, omnipotent and omniscient God, but the term covers many other modes of faith, from Buddhism, on the one hand, to the grossest superstitions of the most depraved savages, on the other. The word is also employed, though improperly, as if it were a synonym of theology. It is further frequently used in popular speech as if it meant churches, or bodies of worshippers, bound together by one or more articles of faith and rules of Church Government held and observed in common. Such is the sense in which it is used in the following brief summary of the creeds and doctrines of the leading faiths. Without this explanation it might seem singular to treat separately of Catholics, Church of England, Methodists, Baptists, Congregationalists, and so on, instead of considering them under the collective heading of Christian. For convenience of reference the religions and denominations are arranged in alphabetical and not chronological order.

BAPTISTS

are so called because the vast majority of them hold that the rite of baptism—which, in their view, consists in the immersion of the whole body in water—should only be administered to Christian believers who are old enough to give a reason for the faith that is in them. Thus baptism is the outward and visible sign that the recipient is already converted, the rite of itself having no intrinsic spiritual significance. Baptists believe in the Trinity, in the inspiration and authority of the Bible as a revelation from God, in the

Atonement, and in the need of regeneration and personal holiness. The first Baptist community was formed in 1633 at Wapping, in London, under the pastorate of John Spilsbury. Secessions, however, have taken place from time to time, the two leading branches now being the Particular Baptists, who mostly accept the Calvinist doctrine of election, and the General Baptists, who maintain that Jesus died to redeem all men. In their Church system every congregation is self-governing and most of their churches belong to the Baptist Union, which was founded in 1832; but possesses no right to interfere with the autonomy of the component Societies. In the United States the first Baptist church was formed in 1639 by Roger Williams, after he had himself been publicly immersed.

BRAHMINISM, or HINDUISM, is the religion professed by about 200,000,000 of the people of India. It is founded on four sacred books in the Sanscrit tongue, collectively known as Vedas. They consist of hymns to various gods and date from 2,000 B.C. to 1,200 B.C., being in any case very ancient. The faith derives its name from the Brahmins, the highest caste, or class, of its professors, and they, in turn, are named from Brahma, the Supreme Being of the later development of the religion. At first Hinduism was polytheistic, being a personification of the powers of Nature, amongst which worship was paid especially to Indra, the Firmament, and Agni, Fire. When, under the code of the lawgiver Manu, the priesthood was exalted, and elaborate and minute ceremonies were set up, an extensive

secession took place, culminating in the rival faith of Buddhism. Though Buddhists were at length expelled from India, in the meantime the spirit of reform had mitigated the polytheism of the old faith and modified it into Brahminism, in which Brahma, the Creator, Vishnu, the Preserver, and Siva, the Destroyer, became the gods of a great triad, along with a host of minor Deities. Vishnu and Siva were the subject of particular adoration. Vishnu has appeared in the guise of avatars, or incarnations, of which nine have been manifested on earth, one being yet to come, of which Krishna—a name which some have thought to be a variant of Christ—and Rama are the most venerated. Siva, often under grotesque and even monstrous images, is worshipped with animal sacrifices and self-torture, in many cases hideous, of devotees. The Ganges and other rivers, the cow, serpent and monkey, the peepul, or sacred fig-tree, are also objects of worship. In process of time the idolatry, etc., of the system were toned down into a scheme of philosophy, which taught that there was one Supreme Being (Brahma), from whom the other divinities emanated, and that man's soul was part of the Divine Essence into which it was ultimately re-absorbed. The castes originally numbered four—Brahmins, from which the priests were chosen; Kshatriyas, princes or warriors; Vaisyas, merchants and traders; and Sudras, labourers and other wage-earners. Excepting that of the Brahmins, each caste has been further divided into more or less numerous sections. The Brahmo Somaj is a modern revolt against excessive Brahminism. It arose in 1818, under Rammohun Roy, a wealthy, able, and high-minded Hindu. Under it Brahma is recognized as the One God, and his worshippers collectively form the Church. The Brahmo Somaj is thus in effect a purified Theism.

BUDDHISM

is the form of religion professed by more than 500,000,000 persons, or over one-third of the human race. It dates from the fifth century before Christ, and is named from the highest appellation

—Buddha ("Enlightened")—given to its founder, Prince Siddhartha, who, in certain of his phases, was also styled Sakya-muni and Gautama, but who, according to some responsible authorities, was a mythical personage. The religion is destitute of the idea of God—that is, God is neither affirmed nor denied,—but there is worship or adoration of Buddha, for which purpose many temples have been built in China, Japan, Ceylon, Tibet and India. Prayer, contemplation, and the burning of incense before the innumerable images of Buddha (some of which are of enormous size) are the chief features of the worship. Buddhists believe in metempsychosis, or the transmigration of the soul, according to which when a man dies he immediately reappears in another man, or an animal, or even, it may be, matter. They believe also that human existence is a curse, since old age, misery and death are due to birth, and that, accordingly, Nirvana, or escape from existence—a condition of complete extinction, annihilation, or nothingness—is the highest bliss to which man may aspire and which can only be attained to by leading an austere and ascetic life and by practising charity, humility, respect for parents, regard for truth, obedience, purity, knowledge, meditation, prayer, sympathy, and unselfishness. It involves, in fact, the most perfect obliteration of self. Buddhism originated as a protest against Brahminism in India, in which country, however, the number of its adherents is still comparatively small.

CATHOLICISM

See ROMAN CATHOLIC CHURCH.

CHRISTIAN SCIENCE,

at first called by its founder, Mrs. Mary Baker Glover Eddy (born about 1822 at Bow, New Hampshire, U.S.A.), the Science of Divine—Metaphysical Healing, was discovered in 1866. Mrs. Eddy began to teach it systematically in the following year. The keynote to its philosophy is found in the proposition that "All Causation is Mind and every effect a mental phenomenon." Its doctrine, therefore, affirms that "all atomic action is Mind," and that

the imperfect decaying forms of material life are solely the evidences of personal sense, while above this sense, to the spiritually enlightened, there exists the eternal original of the visible universe. Consequently sin, sickness and death are not manifestations of God. Immortal man has an immortal soul and a deathless sense of Being, but mortal man believes that spirit or soul exists only in matter, a belief which is shattered by the law of Life and Truth. This law, expressed in the words, "I am all," is ever present to rebuke any claim of another law. Christian Science teaches that sympathy with sin, sorrow and sickness would dethrone God, as Truth, for Truth has no sympathy with error. Disease cannot be eradicated, if it be admitted that God sends or sees it. Disease and sin are unknown to Truth, as darkness is unknown to light. Mrs. Eddy defined the cardinal tenets of Christian Science in these terms: "1. As adherents of Truth, we take the inspired Word of the Bible as a sufficient guide to Eternal Life. 2. We acknowledge and adore One Supreme and Infinite God; we acknowledge one Christ—His Son, Christ Jesus; the Holy Ghost, or Divine Comforter, and man as His image and likeness. 3. We acknowledge God's forgiveness of sin, in the destruction of sin, and the spiritual understanding that evil is unreal, hence not eternal. But the belief in sin is punished as long as it lasts. 4. We acknowledge Jesus' atonement as the evidence of Divine, efficacious Love, unfolding man's unity with God through Jesus Christ, the Way-shower. 5. We acknowledge that man is saved through Christ, through Truth, Life and Love, as demonstrated by the Galilean Prophet in the healing of the rich and the over-coming of sin and death. Also, that the Crucifixion of Jesus and His resurrection served to elevate faith and understanding to perceive eternal Life—the aliveness of Spirit and the nothingness of matter. 6. We solemnly promise to strive, watch, and pray for the Mind to be in us which was also in Christ Jesus; to love one another; and to be meek, merciful, just and pure."

CONGREGATIONALISTS, OR INDEPENDENTS,

to employ the name by which the community was called in the turbulent period of English Church history throughout the seventeenth and a considerable portion of the eighteenth century, are a body of Christian Non-conformists who hold that a Church or congregation is complete in itself, with full and sole power to elect its own officers, to manage its own affairs, and to be independent of all authority saving that only of the Head of the Church, the Lord Jesus Christ. It has been asserted that the first society was formed under the ministry of Robert Browne (1550-1633?), who taught that religion being an affair of the conscience was not a matter of which the State could take cognisance; but, however that may be, the Independents suffered severely under the Stuarts, and it was not until after the promulgation of the Act of Toleration (1689) that they began to enjoy any immunity from persecution. Each congregation possesses perfect self-government, and though the various churches in England and Wales were federated in 1831 under the title of the Congregational Union, this institution has, nevertheless, no power of interference in or jurisdiction over any congregation. Great latitude of doctrine is thus permissible. One congregation may be Calvinist, another Broad, and a third may accept what is called the New Theology—variously described as Progressive Unitarianism and Swedenborgianism—and so long as the congregation is willing to support the minister, neither pastor nor flock can be hindered or restrained, the one from giving and the other from receiving, what both are agreed upon. Every congregation elects its own minister and deacons, and these are the only office-bearers known to it.

EASTERN CHURCH

See GREEK CHURCH.

ENGLISH CHURCH, or the CHURCH OF ENGLAND, claims an unbroken succession of episcopal authority from the time of the Apostles to the present day. St.

Paul is said by tradition to have visited Britain, and there is no doubt but that the early British church was almost submerged by the flood of paganism that overran the land during the Saxon inroads that followed the Roman Occupation. Towards the end of the sixth century Pope Gregory the Great sent Augustine on a mission to convert the people anew, and his efforts were so successful that not only did the Church flourish again, but Augustine himself became the first Archbishop of Canterbury (597). The influence of Rome thus established grew rapidly after the Conquest, reaching its climax under John. Henceforward the power of the Papacy declined and unmistakable signs of a need for Reform were manifested in the popular support accorded to John Wycliffe. The rupture with Rome was effected in the reign of Henry VIII. It was due partly to the King's quarrel with the Pope and partly to a demand for national freedom from foreign supremacy in matters religious. Under Edward VI, to whose reign the first (1549) and second Books of Common Prayer (1552) belong, and Elizabeth, in whose reign the Thirty-nine Articles were decreed (1563), the Reformation was completed. The doctrines enunciated in the Second Common Prayer Book and the Thirty-Nine Articles constitute the confession of faith of the English Church, which, while retaining much of the Roman liturgy and ritual, rejected certain distinctly Roman tenets, such as the doctrine of Transubstantiation, Auricular Confession, the worship of the Virgin and the celibacy of the clergy. The chief features in the history of the Church since the accession of James I (1603) were the expulsion of the Bishops from the House of Lords (1641), the abolition of Episcopacy in 1643—both measures rescinded at the Restoration,—the lengthened period of apathy in the eighteenth century, which was dissipated by the Revivalism inaugurated by John Wesley and George Whitefield, and the Oxford or Tractarian Movement (1833-41). The Church is governed by the Convocations of Canterbury and York which, acting in concert, form the National

Council, or Sacred Synod. Each Convocation consists of two Houses, the Upper and Lower, the Archbishop of Canterbury and twenty-six bishops forming the Upper House of the Southern Province, the Archbishop of York and nine Bishops forming that of the Northern. The Lower House is composed of the deans and archdeacons, and two proctors from each Cathedral Chapter, besides two proctors representing the clergy in each diocese in Canterbury, and two representing the clergy in each archdeaconry in York. Conventionally there are supposed to be three parties in the Church—the Evangelical, or Low Church, the Broad Church, and the High Church,—but this division has only a controversial, not a legal, significance. Archbishops and Bishops are appointed by the Crown, but, in virtue of seniority, the Archbishop of Canterbury is Primate of all England

FRIENDS

a society of Christian believers, was founded by George Fox in 1646. The body is commonly known as **Quakers**, an epithet applied to the members by Gervase Bennett, a magistrate, whom Fox exhorted to "tremble" at the Word of God. The leading tenet of the Friends is that called the Inward Light, according to which they hold that the spirit of God dwells in the heart of every person, shining as a light to guide and direct, and that they who heed and obey it are the people of God. From this it follows, they contend, that there is no need of a creed, liturgy, priesthood, or sacrament. In public worship they wait in silence until the Spirit "moves" one or more of those present, man or woman, to pray or preach. Though they do not object to set aside one day in seven to public worship and private meditation, they do not attach any special sanctity to one day more than other, deeming that the Holy Spirit is operative on all days alike. They carry out the letter as well as the spirit of Christ's teaching, and hence refuse to take oaths, to counter-act military service, to pay tithes, and to render homage. They were formerly wont to dress in an extremely quiet and simple manner, and to use

"thou" and "thee" in private conversation, to disapprove of dancing, cards, and the like as frivolous, and even to discountenance art and music. Current usage, however, has sanctioned a considerable relaxing of several of these minor observances. Marriage is looked upon not as a civil contract, but as a Divine ordinance, and it is, therefore, the prerogative of God alone to join persons together in matrimony, the interference of a priest being wholly unwarranted. Their marriages are sanctioned at a monthly meeting before being ratified in public worship. Their views of marriage and the oath have received legal consent, and they have won other privileges by means of passive resistance.

GREEK CHURCH

embraces most of the Christians of Russia, in which it was established in 988, Turkey, Greece, and Asia Minor. It is a branch of the Holy Oriental Orthodox Catholic and Apostolic Church, or Eastern Church, which, as including the cradle of the Christian Church and the homes of the Greek-speaking Apostles and evangelists who first spread the Gospel, is thus the Mother Church of all the Christian Churches. During the first five centuries whilst the Roman Empire declined and the Byzantine Empire was at its height, the Church had its seat in Constantinople and its sway was recognized, but, as the Roman pontiffs' power grew, jealousy and rivalry between the Churches of the East and West increased, and in 1054 reached its culminating point and each excommunicated the other. The ostensible cause of strife between the two Churches arose out of a controversy respecting the procession of the Holy Ghost. According to the Nicene Creed, drawn up in 325, and enlarged by the Council of Constantinople in 381, the Holy Ghost "proceedeth from the Father," but at a Council in Toledo (558) the Roman Fathers added the words "and the Son" (*Filioque*). The Eastern Church steadily refused to countenance the addition, and as the Western Church proved inexorable, separation became inevitable and final. This dispute,

which is known in Church history as the Filioque Controversy, and the repudiation of the Papal supremacy still constitute the two leading points of difference between the Churches. The Greek Church otherwise holds much the same tenets as the Roman, though it does not worship the Virgin and allows the *status* of marriage to its priests before ordination. It forbids the use of images, but sacred pictures (*icons*) are sanctioned and are extremely popular. The Tsar is the head of the Church, the affairs of which are administered by the Holy Synod. Attempts to reconcile the Eastern and Western Churches were made periodically after the rupture, but the fall of Constantinople (1453) involved the collapse of political power in the East, and Rome henceforward determined to rule alone. Under the Turkish régime the Church of St. Sophia was converted into a mosque and Christian influence gradually declined. The Greek ritual is said to be more elaborate and more gorgeous than even the Roman.

HINDUISM.

See BRAHMINISM.

INDEPENDENTS.

See CONGREGATIONALISTS.

JUDAISM,

or the faith held by the Jews, is remarkable for its conservative character, the provisions of the Mosaic dispensation being strictly adhered to. They believe in One God, the Creator and First Principle, Indivisible, Immaterial, Eternal, Who alone ought to be worshipped. Moses is held to be the greatest of the prophets, and the law which he left was fully inspired and dictated to him by the Almighty, and is consequently neither to be added to nor diminished. God knows and governs all men's actions, rewarding the observance and punishing the violation of His Law. Jews look for the coming of a Messiah, and believe that God will raise the dead at the last period of time and judge all mankind. The Jewish Sabbath extends from sunset on Friday to sunset on Saturday, and is kept by

worship in the synagogue (in which the men and women sit apart), the service consisting in the reading of the Law, a sermon or exposition, prayers and the benediction. Their great feasts are those of the Passover, Pentecost (or First Fruits) and Tabernacles (or Ingathering). The requirements of the Levitical Law in respect of forbidden meats and other matters are rigidly complied with, and every year a Day of Atonement, or national humiliation for the sins of the whole people, is observed.

LATTER DAY SAINTS

See MORMONS.

LUTHERAN CHURCH

the established religion of Germany, Denmark, Norway and Sweden, was founded by Martin Luther in 1519. Its doctrinal system is based on the Augsburg Confession, and its two distinctive features are the doctrine of consubstantiation, according to which the body and blood of Christ are substantially present together with the bread and wine in the Lord's Supper, and the doctrine of justification by faith alone. Certain doctrines and practices of the Roman Church are rejected, such as masses for the dead, the sale of indulgences, purgatory, the invocation of saints, penances, extreme unction, and the celibacy of the clergy. Preaching, prayers and psalmody constitute the main routine of the service, but crucifixes, the use of lighted candles on the altar, and the sign of the Cross in pronouncing the benediction at the close are recognized. There are no Lutheran bishops in Germany, where their place is taken by superintendents, but episcopacy is admitted in Sweden, Norway and Denmark. In Germany a council or consistory in each State regulates affairs and settles disputes or other difficulties. The head clergy, or superintendents, alone have the power to ordain, but the pastor may confirm.

METHODISTS

To John Wesley (1703-1791) is primarily due the foundation of the Methodist Movement. Whilst attending Christ Church in Oxford, he and

his brother Charles (1708-1788), along with a few like-minded friends, were in the habit of meeting together to study the Bible and strengthen their spiritual lives. Because of their earnestness and the methodical manner in which these reunions were conducted, they were nicknamed "Methodists," and the title applied by way of taunt was ultimately adopted as a distinctive appellation of their body. In conjunction with George Whitefield, the founder of Calvinistic Methodism, John Wesley engaged in open-air preaching and formed societies intended to be subsidiary and not antagonistic to the Established Church. On account of certain opposition, Wesley, who personally desired to remain in the communion of the Church, formed his adherents into a regular society, and in 1739 the first Methodist Chapel was founded. In 1740 Wesley and Whitefield separated owing to a difference in their views. The doctrines of the Wesleyan Methodists are contained in Wesley's *Fifty-three Sermons* and his *Notes on the New Testament*. They are substantially those of the Church of England. Most Wesleyan Churches use the Prayer Book in their services, usually in the morning; either the Book of Common Prayer, as authorized to be used by Wesley in 1786, or a revised edition issued by the Conference. Class meetings and love feasts are a characteristic feature of Methodism. There have been numerous schisms from the parent body, but not on doctrinal grounds, for nearly all the seceding sections hold the same tenets. Among these sects are the "Methodist New Connexion" formed by Alexander Kilham (1797); the "Primitive Methodists," founded by two local preachers, Hugh Bourne and William Clowes (1811); "The Bible Christian Society," originated in 1815 by William O'Bryan, and "The Methodist Free Churches." The Welsh Calvinistic Methodists are adherents of Methodism, which is also very strong in the United States. Methodists are not so much concerned with doctrine or church government as with personal holiness. Their adherents are graded into "classes," consisting of a limited number of converts, who meet

together frequently for the exchange of religious experiences; "circuits," comprising a certain number of "classes" and churches; and "districts," composed of a certain number of "circuits." The governance of the whole body is entrusted to the Conference which assembles once a year. No minister, excepting in very peculiar circumstances, is permitted to preach in the same circuit for more than three successive years, though he may return to it after doing duty for three years in another circuit.

MOHAMMEDANISM

is the faith professed by 200,000,000 of the human race, of whom 80,000,000 are found in Turkey, Persia, India, Arabia, and other Asiatic countries, and 120,000,000 in North and North Central Africa. It was delivered by Mohammed in 610, and by its adherents is called Islām, or "Resignation and complete surrender to the will of God." The Koran, its Bible, is supposed to have been a revelation to Mohammed and its keynote is the formula, "There is no God but God, and Mohammed is His Prophet." Its professors have a firm faith in angels, of whom two attend every believer. The efficacy of prayer is accepted, and the Moslem prays five times every day—at sundown, night-fall, daybreak, noon, and in the afternoon. Their temples or mosques all contain a niche or other clear indication of the direction of Mecca, towards which the faithful turn at the time of prayer, having been summoned thereto by the Muezzin proclaiming the hour from the minaret. Ablution is enjoined, and in the desert, where water cannot be had, sand is employed. Almsgiving is compulsory. Hell contains seven divisions, of which the second is reserved for Christians, while Paradise, with its beautiful hours, awaits the true believer. God's foreknowledge and predestination are cherished to the extent of fatalism. Jesus is recognized as a divine being, but not as the Son of God, and has, moreover, been replaced by Mohammed. Friday is the Mohammedan Sabbath. During the month of Ramadan (the ninth of the Mohammedan year) an all-day fast is imperative, and every

believer who can do so makes a pilgrimage to Mecca before he dies. Though the moral code of Islam is severe, the Koran permits the believer to take four wives; the condition of woman is degraded, and slavery is sanctioned. None but a degenerate Mussulman drinks alcoholic beverages, and the flesh of swine is an abomination. Mohammed was so anxious lest his followers might lapse into idolatry that both images and pictures are sternly forbidden. Islam is divided into the Shiah and Sunni churches. The former, the smaller in number, is the stronger in Persia, and traces its foundation to Mohammed's cousin Ali; the Sunni Church, of which the Sultan of Turkey is the head, is predominant in Africa, India and Arabia, and recognizes the four immediate successors of Mohammed as true Caliphs. The two sects differ also as to the headship of Islam, the Sunnis advocating the principle of election, the Shiahs apostolical descent by appointment and succession.

MORMONS

or the "Church of Jesus Christ of Latter Day Saints," constitute a sect formed in 1830 at La Fayette, in New York State, by Joseph Smith, who professed to have discovered, through Divine revelation, certain records which, when translated by him, became the Book of Mormon. The body was subjected to much persecution and finally settled at Salt Lake City in Utah in 1847. Their distinctive doctrine sanctioned polygamy, and this practice was the main, if not the only cause of the obloquy they endured. Public opinion at length unreservedly condemned the community and, in 1890, Wilfred Woodruff, the then head of the Church, proclaimed that plurality of wives, or "sealing," was abandoned. Mormons believe in the Trinity, the Atonement, repentance, baptism by immersion for the remission of sins, the gift of tongues, prophecy, in the Bible and the Book of Mormon as the Words of God, in the literal gathering of Israel and the restoration of the Ten Tribes, that Zion will be built on the American continent and that Christ will reign

personally upon the earth. In their Church government they adopt the organization of the primitive Christians, that, namely, of apostles, prophets, pastors, teachers, and evangelists.

NEW JERUSALEM CHURCH, founded in London in 1788 by the followers of Emanuel Swedenborg (1688-1772), is so called because the Last Judgment having been effected in the World of Spirits in 1757, a new dispensation was then inaugurated, signified by the New Jerusalem in the Revelation of St. John, of which Swedenborg was the precursor and his writings were the doctrine. The New Church, as it is called for brevity, believes that there is but One God in Essence and in Person, in Whom resides a Divine Trinity of Father (essential Divinity), Son (Divine Humanity) and Holy Ghost (Divine Proceeding), answering to the soul, body and operative energy in man, and that the Lord and Saviour Jesus Christ is that One God. It holds that the Word was made flesh to rescue man from the dominion of hell. It teaches that there is not only a literal and natural text in the Scriptures (not all of which are canonical), but also a spiritual, and that the former is explained by the latter according to the science of correspondences which Swedenborg rediscovered. Death is only the laying aside (for ever) of a material body, the person rising again in a spiritual body, in which he lives to all eternity—in heaven, if his ruling affections and life have been good; in hell, if his ruling affections and life have been evil. The ritual of the New Church is simple. They use a liturgy, read lessons, preach and praise. The affairs of the Church are administered by an annual conference of ministers and laymen, and the Swedenborg Society disseminates its literature. Swedenborgians are not proselytizers, their contention being that their views are gradually permeating other Churches. Swedenborg himself was a member of the Lutheran Church, from which he never seceded.

PARSEES

are the followers of the doctrines

taught by Zoroaster, or Zarathustra, one of the greatest of Oriental teachers, of whose biography nothing is known, but who is commonly referred to 800 B.C. The distinctive feature of the faith is dualism, or the warfare between the two creative powers—Ormuzd or Ahura-Mazda, the god of light and the author of all good, and Ahriman, or Angra-Mainyus, the lord of darkness and the cause of all evil. These two powers—the Good and the Evil—carry on constant warfare in the world and the soul. The conflict will last for 12,000 years and end in the victory of the good, when evil will be exterminated, the dead will rise to be reunited to their souls, the living will be immortal, and every one will live happily, under Ormuzd, for ever afterwards. The Parsees are worshippers of the sun. Fire is their sacred symbol and is kept continually burning—being fed by sandalwood—in their temples. Even the fire on the hearth is never put out, and the pious Parsee refrains from smoking because of the reverence paid to fire. Prayer is indulged in several times daily—on rising in the morning, after bathing and other functions, and on retiring for the night. Purity and cleanliness are much insisted on, and contact with the dead is a special source of defilement. The dead are not buried, but conveyed to a Tower of Silence, a stone structure about 20 feet in height, resembling a truncated round tower. The corpse is conveyed to a platform on the top, where the flesh is devoured by vultures and the bones are afterwards cast into a pit below. Parsee women enjoy a much more honourable position than do their Hindoo and Mohammedan sisters. The Parsees are numerous in Bombay and Persia, where they are often spoken of as Zoroastrians. Their Scriptures are contained in the Avesta written in Zend, a tongue akin to Sanscrit, and comprise hymns, songs, laws and prayers. The Magi, or Wise Men from the East, who came to worship the infant Jesus, are supposed to have been Parsees.

PRESBYTERIANS

is the name given to the large body of Christians who hold that the Church

is governed by presbyters and by them only. According to this view, there is only a verbal distinction between "presbyter," and "bishop." Of presbyters there are two kinds—the teaching elder, who preaches and administers the Sacraments, and the ruling elder, who supervises and visits the congregation—and with them may be associated a deacon, charged with attending to the finances of the church. In creed the Presbyterians were formerly Calvinist, but their views have become softened through course of time. The ritual is simple, being confined to prayer, praise, preaching and the reading of the Scriptures. Organs and choirs, once vehemently denounced, are now customary. The control of the congregation is entrusted to the Session, composed of the minister and ruling elders. Then comes the Presbytery, composed of the ministers of the churches in a given area and one elder from each congregation. Above this is the Synod, composed of the presbyteries within a still wider area, and at the head of all is the General Assembly, which meets once a year, is presided over by a Moderator, and is composed of the ministers of all the churches of one particular denomination, and one ruling elder from each congregation. Presbyterianism dates from the Reformation, and was largely established through the instrumentality of John Knox (1560). The church adopted the Westminster Confession (1646) and the Larger and Shorter Catechisms embody the standards of orthodoxy. The attempt to impose Episcopacy on the Scottish people was repelled by the formation of the Solemn League and Covenant (1643). The Established Kirk of Scotland is Presbyterian, and differs only from the other forms by recognizing the headship of the sovereign, who is represented in the General Assembly in May by the Lord High Commissioner. To abuse of the patronage system was due the secession in 1843 of Dr. Chalmers and 470 ministers, and most of their congregations, who set up the Free Church of Scotland. In 1847 the Relief and Secession Presbyterians combined to form the United Presbyterian Church. In 1900 the Free and United Presbyterian

Churches amalgamated and founded the United Free Church of Scotland. A minority of the Free Church maintained that the union was illegal, and their contention was upheld by the House of Lords (1905). The disposition of the Church property and funds, however, was arranged according to the proposals of a Commission of Inquiry (1906). Presbyterianism is strong in Scotland, in certain parts of England, in Ulster, Holland, the Cape, Canada, Australasia and the United States.

QUAKERS

See FRIENDS.

ROMAN CATHOLIC CHURCH

though the Daughter Church, claims supremacy over the whole Christian Church, resting its claim on St. Matthew's Gospel (xvi. 18, 19). Traditionally said to have been founded by St. Paul and to have had St. Peter for its first bishop, it thus dates from Apostolic times. For a considerable period it was occupied with ecclesiastical matters pure and simple, but it derived prestige from the fact that the see of its bishop was also the greatest city in the world, and in time consolidated its power. Circumstances largely favoured it. From its earliest days it stood for orthodoxy and the practice of referring heretical or doubtful opinions to it for settlement gave it exceptional *kudos* and privileges. With the founding of the Byzantine Empire political power shifted to Constantinople, but the Roman bishops in their sphere acquired all the more influence, in time asserting a right to command where before they had been satisfied to advise. With the advent of Gregory the Great (590) the change in its character was completed, and henceforward it had to be reckoned with as a temporal as well as a spiritual power. Accordingly when it deemed it necessary so to act, it even went so far as to raise and depose monarchs. When Gregory VII became Pontiff (1073) he ordained that in future only the Bishop of Rome should bear the title of Pope, in itself a customary title of all the clergy in the East and still used in the Greek Church. But when the

Papacy assumed temporal sway, abuses were allowed to grow up within the religious body and these attained such proportions that, owing partly to the Renaissance, partly to the invention of printing and partly to the outbreak simultaneously in many Christian countries of a sense of discontent, the movement known as the Reformation rent the Church (Luther's conflict began on October 31st, 1517), and she suffered serious secessions which set up churches of their own. It was against the spirit and tradition of the Papacy to conciliate these other churches, and the attempt has never been made. In doctrine the Roman Church maintains the creed of the earlier Councils, but has promulgated tenets and practices distinctively her own, such as transubstantiation (that is, the bread and wine in the Eucharist become, by the act of consecration, the body and blood of Christ), worship of the Virgin, penance, extreme unction, the invocation of saints, auricular confession, the celibacy of the clergy, the immaculate conception of the Virgin and the infallibility of the Pope. (The second last did not become an article of faith until 1855, and the last was only declared in 1870, when it led to the withdrawal of the Old Catholics.) The temporal power of the Papacy was annulled in 1870. Along with the Pope the college of Cardinals—seventy in number elected solely by the Holy Father—forms the governing Council of the Roman Church. The Roman Service is in Latin, and the ritual is of a splendid character, frequently sustained by finely-rendered music. Amongst Roman Catholic religious Orders the Jesuits, founded by Ignatius Loyola in 1540, have proved the staunchest supporters of the power of the Papacy. As the Order, in course of time, arrogated the right to interfere in general politics, it became obnoxious to several countries, from which it was expelled in turn, Portugal leading the way in 1759. Under pressure from the European

Courts Pope Clement XIII abolished the Order in 1773, but the Jesuits survived all these edicts and the Order was re-established in 1814, and gradually returned to the countries from which it had been banished. It was, however, no longer allowed to regain its old ascendancy in civil matters, and was, in fact, once more expelled from Germany (1872), and France (1880), but it secured the confidence of the Vatican, and is said to have inspired the dogma of Papal infallibility. The Jesuits' strongest claim to respect is the service they rendered to education.

SWEDENBORGIANS

See NEW JERUSALEM CHURCH.

UNITARIANS

Believe in the personal unity or oneness of God in contradistinction to the Trinitarians, who believe in three Persons in one God. Arius, in the fourth century, and Laelius Socinus and his nephew, Faustus Socinus, in the sixteenth century, taught doctrines in some respects similar, while in Great Britain such views have been espoused from time to time since the Reformation, John Milton, Samuel Clarke, Joseph Priestley and Thomas Belsham, amongst others, professing them. As the logical consequence of their main tenet, Unitarians do not accept the Atonement, a personal Devil, eternal punishment, miracles, and Original Sin. Jesus is regarded by them as the greatest teacher that has ever lived and as divinely inspired, and they adopt the Bible as the textbook of the "ever true and permanent religion of humanity." The affairs of their church are administered by the British and Foreign Unitarian Association.

UNITED FREE CHURCH

See PRESBYTERIANS.

ZOROASTRIANS

See PARSEES.

SELF-HELP

"KNOW THYSELF!"

This maxim is attributed to Solon, who flourished 600 years B.C., and was the greatest lawgiver of ancient Greece. It is one of those bedrock truths that belong to all ages and all countries. Therefore, it is the first article of advice that must be impressed on the young person, of either sex, who sets out to earn a living.

Many an unhappy beginning would have been avoided had this home truth been steadily borne in mind. The race is not always to the swift, who starts well does not necessarily breast the tape first. A youth who is ignorant and knows that he is ignorant is by no means past redemption. In point of fact, he has learned more than he is quite aware of. But the man who is ignorant and thinks he knows a lot is little better than a quack and a fraud, whose last state will be worse than his first.

Sir Isaac Newton, shortly before his death, reviewed his long and fruitful career in these immortal words: "I do not know what I may appear to the world, but to myself I seem to have been only like a boy playing on the seashore, and diverting myself in now and then finding a smoother pebble or a prettier shell than ordinary, whilst the great ocean of truth lay all undiscovered before me."

To know oneself is not at all the same as to undervalue or depreciate oneself, but rather to realize one's powers and limitations with a view to make the best and wisest use of the one and to broaden and enrich the other. "Who aimeth at the sky," wrote George Herbert, "shoots higher much than he that means a tree." But, as the German proverb reminds us, "To aim is not enough, we must hit."

Though it is hard to unite in one person all the attributes of Shakespeare's model, yet some at least of the

qualities he enumerates are within everybody's reach. This is the portrait the dramatist drew—

"Is not birth, beauty, good shape, discourse, manhood, learning, gentleness, virtue, youth, liberality, and such like, the spice and salt that season a man?"

BEGIN WELL

"Always begin as you mean to go on" is a precept that will carry you far. For, since every one wishes to do well, there will be every prospect of a good start. But as you intend to go on as you have begun, there will also be the prospect of a good finish.

When you have ascertained the rules and regulations of the office, warehouse, factory, mill, foundry, yard, or shop, comply with them loyally in spirit as well as in letter, even if some of them strike you as harsh, fussy, or unreasonable.

PUNCTUALITY

will be the first essential, and as this will entail early rising, in most cases, a good habit will be established which will enable you to get more out of life than is dreamt of in the sluggard's philosophy. Every golfer will tell you that to "get well away" is necessary to a keen game.

CLEANLINESS

is said to be next to godliness, but however that may be, it is desirable in itself and the morning tub will give you a tonic, the benefit of which will last all day. The manager will also expect to see you tidy and neatly dressed. Taste in attire is not a matter of money. Avoid what is "loud," eccentric, horsey, and vulgar.

METHOD

Cultivate from the first a methodical way of doing things. Certain proverbs put the advice pithily—"A place for

everything, and everything in its place." "There's a right way to do a thing as well as a wrong." "If you want a thing done, do it yourself."

ANTICIPATE

When you begin to feel your feet, you will have a chance of showing what you are worth. Do not wait to be told to do everything, but learn to anticipate and look ahead. Try to take a real and intelligent interest in your work and make your employer's success yours.

You will meet some people who are always grumbling and brooding over difficulties, whereas an obstacle looked at fairly and squarely often vanishes into thin air.

"I like a' things weel," said Miss Wood of Elie, "and guid things best." True philosophy, and a right spirit, in that sunny speech.

BUSINESS AND SENTIMENT

One sometimes hears it said, "There's no sentiment in business." Do not believe it. You cannot divorce business and morals. One of the great nations of the world, commonly considered to have a brilliant future, is endangering its position, present and to come, because it lacks honesty and virtue. So you shall always practise honesty, manliness, truthfulness and integrity. Even when it seems to pay to be smart and "slim," nothing is gained in the long run if you forfeit self-respect. Our forefathers observed these laws and became men of character.

COURAGE

is called for elsewhere than on the battlefield, else it would be a poor lookout for the race. If you make a mistake, own up. It is paltry to hide it and still worse to let another suffer for your error. You will no doubt see and hear things of which you cannot approve. It will be more kindly to correct them rather than play the part of tale-bearer. Your schoolboy horror of the sneak, however, will not stand the wear and tear of the world, but you can, in the last resort, warn a misguided fellow that, even to save him from himself, you will be compelled to report any serious misconduct unless

amendment be prompt and thorough. But you must be sure that it is serious.

MANNERS

So far as personal demeanour goes, do not forget the old saying, "Manners make the man." Politeness costs nothing. Deference to seniors is as easy as courtesy to a woman, and as pleasant. Be careful, too, of your walk and conversation before men, who, in turn, should be scrupulous of their talk before you. Juvenal, the famous Roman satirist, expressed a profound truth in memorable words—*Maxima debetur puero reverentia*, "The greatest regard is due to a child," because, as Wordsworth sang, "The child is father of the man."

Other snares surround youth. The Irishman who declared that "he could resist everything but temptation" lives only in anecdote, for temptations beset us, not that we may fall into them, but that we may rise superior to them and conquer them. This is more easily said than done, yet that is the only way to peace of mind and happiness.

BAD HABITS

Beware of drink. Fortunately, the habit of "nipping," which used to be a pitfall to the thoughtless and unwary and ruined many a bright and promising young man, has been voted "low" and is no longer the curse of city life. But drink is an acquired taste and, even in those cases where there can be no question of abuse of it, for the sake of example, every lad should be an abstainer. No one can tell or measure the force of example.

Betting is another prolific source of mischief and degradation. It is a fool's game, but it has a dangerous fascination, and is by no means confined to the racecourse. Avoid it, you would poison. Even what is apologetically called the "harmless sweepstake" is better left alone. "Behold, how great a matter a little fire kindleth."

It is a pity so many admirable games, games demanding undoubted skill and science, are played for stakes. There is not one of them that cannot be played for itself alone and on

its merits. But convention on this point is very strong. People who would never think of betting on a horse, do not object to playing bridge for money. The only stipulation they insist upon is that the points shall be nominal, and this may be found in practice to operate as a safeguard; indeed, many who have pondered the question maintain that, over a given time (six months or a year), gains and losses balance each other. Still, the smallest of stakes may prove to be like unto the thin end of the wedge and the only certain safeguard is to play every game for the love of it. Rightly considered, a game that needs an artificial stimulus is a game that is lacking in some element of interest.

AS TO OVERTIME

When you know "the ropes" you will discover that other factors go to success in business besides the fundamental ones of punctuality, diligence, method and integrity. For instance, a clerk who has his eye constantly on the clock may jeopardize his chances of promotion. It is always pleasant to be able to leave the office at the customary hour, but even in the best-regulated establishments it is sometimes impossible to forecast the run of the day's work. Consequently, when emergency demands overtime, put the best face you can on the matter and do your extra "piece" with right good will. Employers who habitually "sweat" and "hustle," though they are too selfish and short-sighted to realize it, gain nothing by their tactics. They cannot have it both ways. That, however, is their concern not yours, and your wisest plan is to steer clear of such offices, the existence of which is more generally known than their owners imagine.

DAWDLING

Again, to dawdle profiteth no man. Indeed, the slacker is a nuisance to his master, to his fellows and to himself. He seems to block everybody's road. Dilly-dallying may be a second nature to him, but how about his fellows, whose work he may be keeping back, because his is not ready to fall into line or to link up with theirs? There can be

nothing but scorn and contempt for such selfishness as that.

COURTESY

In dealing with customers never forget that you are acting for another, that you are taking the place of one who has left everything to you with completest confidence. So carry yourself that by instant courtesy, sincere desire to please, and a winning and obliging demeanour—not abating therein one jot of gentlemanliness—you may perhaps convert a casual into a constant client and thus effectively help to build up a flourishing business. Payment is sometimes tempered by results.

BORES AND OTHERS

You must not expect to tread the primrose path of dalliance in trade, or commerce, or manufactures. In fact, besides an inevitable amount of worry and annoyance, you are bound to meet with bores even of the first magnitude. There is the visitor who deems that time was made for slaves and is quite prepared "to talk your head off." You will, however, soon be able to size up your interviewers and, with a little tact and firmness, acquire the knack of showing them to the door with such a good grace as almost to make them think you are inviting them to dinner.

AFTER BUSINESS

pleasure. You are entitled to find much more in life than the weary round of making money for yourself or other people. Music, the drama, pictures, social entertainments, such as whist drives and dances, games of skill, all these are good in their place and must on no account be neglected. Above all things recognize the claims of literature as paramount, and keep up your reading of the best authors. If you are level-headed and know the world, you will not degenerate into that odious creature called a prig. Take some interest in public affairs and questions of the day: as to which you will do well to remember the famous maxim,—“In things that are essential, unity, in things that are open to doubt, liberty, in all things, charity.”

SPEAKING

PUBLIC SPEAKING

Scarcely a function of the day passes without some amount of public speech being necessary; it may be as chairman of a local meeting, as proposer of a toast or vote of thanks (or undertaker of the reply thereto), as opener of a bazaar, or as participant in a discussion after a lecture or in a more or less fiery debate on a political question. Sometimes it happens that a person is unexpectedly called upon to "say something" in circumstances when refusal is impossible, and on such occasions the experience may be as painful to the audience as to the unfortunate speaker. With a view to assist those who are likely to be required to speak as well as those who wish to learn the art, we propose to consider public speaking from various standpoints, but always in a practical spirit.

Public speaking no longer means speaking in public, but speaking in the hearing of other people, who may number a dozen or a thousand. It may be defined as the art of thinking aloud on one's legs in the presence of an assemblage of strangers, or friends, or both.

It is not identical with elocution, which presupposes several accomplishments and graces not ordinarily looked for in a speech and which, save in the highest exponents, is apt to be artificial rather than spontaneous and natural.

Avoid self-consciousness is an essential piece of advice. The speaker must be cool and collected. If at the outset he only retain presence of mind for a minute or two, he will rapidly adapt himself to the novelty of his position, but if he give way to nervousness, or think of what he is going to say next before he has finished what he is saying at the moment, he will be apt to flounder. Do not speak

quickly, but take things comfortably and ideas and words will flow readily.

VOICE MANAGEMENT

In the management of the voice a variety of suggestions are called for. In the first place, there is no occasion whatever to shout. Clearness of enunciation and a steady utterance count for far more to the hearer than a powerful bellow does. Throw the voice, as it were, to the distant corner of the hall, and if it appear to come back to you smoothly and the physical effort is easy, you may be sure you have caught the pitch of the hall and are speaking well. But a warning will be useful to guard against disappointment. Speaking in a hall that is only partially filled is always more difficult than in a full house. In these circumstances you will literally feel the physical effort of speech, but as you cannot mend matters you must do your best. Always do your best whether your audience be large or small.

ENUNCIATION

Clearness of enunciation is attainable by all. It is said that Demosthenes, the illustrious Greek orator, cured himself of an impediment in his speech by walking on the sea shore and addressing the breaking waves with a few pebbles in his mouth. If you are in the habit of speaking hurriedly, of running your words into each other, or of clipping them, these are defects which you must conquer. Even if you are not likely to speak in public, these faults will mar your ordinary conversation. You know how painful it is to listen to a mumblor. The curious thing is that one is not always aware that one mumbles. One of the most eloquent lecturers of the day is a wholly different being in his private study, where he seems to chew his words till you cannot recognize them.

FINAL CONSONANTS

There is a working rule which has the double effect of securing deliberate speech and clearness of enunciation, and that is, always sound the final consonant of a word. Just try it in your own room and you will be surprised how efficacious it is.

Be careful to give each of your points its *proper vocal value*. Everything a speaker says has not equal merit, and he fails to discriminate between the more and the less important he is bound to fall into a monotone of delivery. You know how wearying it is to listen to a preacher who has adopted this sing-song style. Much of the sleeping in church is due to this. There should be light and shade in a speech just as in a picture.

Too many speakers have a way of dropping their voices towards the close of a sentence, with the consequence that their hearers often lose the full significance of the statement or uttered thought. There is, no doubt, some amount of rhythmic rise and fall in the course of a speech, but this is entirely different from the systematic sinking of the voice below its normal tone at the end of sentences. This culpable practice is the more inexcusable that it is so simply remedied.

PRONUNCIATION

To enounce clearly and slowly a word that is wrongly pronounced has an effect that sometimes borders on the ludicrous. Therefore speakers must pay heed to the right pronunciation of words. An out-of-the-way word wrongly pronounced is more likely to escape animadversion than a mispronounced everyday word, simply because many of the audience, possibly a majority, may know no better than the speaker how to pronounce it. But it is different in the case of words in daily use.

Offence chiefly turns upon the unfortunate letter *h*. Lapse in this regard is mainly caused by imperfect sense of hearing. The best way to cure oneself of it is to induce some friend to school one's ear for sound. There are some mechanical aids, but the drawback of these is that one is

apt to forget all about them in the absorption, or excitement of the moment. One of these aids is to learn by rote a list of the words in which the *h* is silent, the inference being that it must be aspirated in all other cases. There are, however, occasions when the abuse of *h* does not seriously offend: it depends upon the speaker. For instance, a working-man orator haranguing a crowd with good sense and rough eloquence may drop the *h* or place it where it has no right to be and one condones it, because in all probability he has never known how to use the letter or been instructed in the matter. But in a speaker of the middle or upper class the fault would at once attract comment.

The misuse of the letter *r* is equally common and certainly more objectionable. "Mariar" and "idear"—to quote two flagrant instances—are due to defective hearing. The malpractice ought to be curable, if a friend will but take the trouble to give the speaker the necessary ear-drill.

Occasionally the indefinite article *a* or *an* before a sounded *h* gives rise to minor difficulty. The working rule is to use *a* when the accent is on the first syllable of the word beginning with the aspirated *h* and *an* when the accent is on the second or later syllable.

The final *g* is sometimes wrongly dropped in the present participle, as "comin'" for "coming," but this habit admits of easy amendment. Much more atrocious is that trifling with a final *g* which converts it into *h*, as "somethink" and "anythink."

ERRORS IN PRONUNCIATION,

due to ignorance of accent or of quantity, testify to defective knowledge of grammar or etymology and ought, of course, to have been corrected at school. That they were not corrected in youth—which, so the copybook informs us, is the season for improvement—leads one to fear that public elementary schools, at any rate, are too generally staffed by teachers who have risen from the ranks and who were themselves neglected in this important matter while at the training college, instead of being

staffed by women who attended secondary and higher schools.

Errors due to unusual articulation are not so much errors as indications that the speaker either hails from the provinces (for example, Yorkshire or Lancashire) or is a native of another land than England (may be Scotland or Ireland).

Habitual errors in grammar are, as a rule, commendably rare, but when a speaker is a notorious offender by use and wont he must put himself to school again, or continue under a stigma till the end of the chapter. As to "shall" and "will," which are so often muddled, the simple rule is—"shall" is merely future in the first person, but imperative in the second and third persons; while "will" is imperative in the first person and merely future in the other two.

PREPARING A SPEECH

Extempore speech only comes by long practice and cannot be acquired by precept. It need not, therefore, concern us here.

It is debatable whether a speech should be written out and then committed to memory, or be carefully pondered and delivered from notes more or less copious. Richard Cobden is said to have spoken without notes and John Bright to have written out his speeches beforehand. This assertion, however, is probably too general, since it is difficult to suppose that Bright kept up what may have been his earlier custom when he was in the zenith of his powers.

But there is no doubt that it is better for the beginner, especially when he has to deliver a really important speech, to think it over carefully, to arrange his argument in ordered sequence and to fortify himself with full notes. Perhaps it would be safer were he to write it out, though there is this to be said against the practice if he be a young man, namely, that he is more likely to cultivate complete coolness and presence of mind in all circumstances if he resolve from the first to depend on nothing but "heads." However, should he write out his speech, he must be sure to take the manuscript with him (written on one side of the paper

only), since failure of memory would probably involve total collapse of the remainder of his effort.

Opinions are agreed on the advantage of the spoken over the read discourse. In the one case the speaker is face to face, eye to eye with his hearers, able mayhap to derive increased fervour from the encouragement he may read in their behaviour. In the other, unless he be very dexterous in the manipulation of his manuscript and actually know many portions of it by heart—which will enable him frequently to look at his audience—he seldom raises his head from the desk or paper, to which it appears as if he were almost glued. Strictly, one uses the term "reading" of a lecture (hence the name), and "speech" of what is literally directly spoken (hence the name); and in cases where one is dealing with more or less abstruse subjects it is legitimate to read—in fact, one then owes it as much to one's audience as to oneself. Even in Scotland, where to read a sermon was once little short of a criminal offence, the matter of the preacher's discourse could usually still save a read sermon.

Norman Macleod, early in his career, preached with great acceptance in an Ayrshire village one Sunday. After service two women were heard discussing the minister. One was enthusiastic, the other grudgingly acquiescent in her praise.

"Wasna *that* a sermon?" cried the one.

"I daursay," sullenly answered the other, "but he read it."

"Read it! I wadna hae cared if he had whustled it."

Slovenliness in the matter and manner of a speaker is a cardinal blunder, commonly arising from imperfect study of his subject and omission to make notes. An important speech is composed of four sections—(1) the exordium, or introduction; (2) the statement, or exhibition of his case; (3) the demonstration; and (4) the peroration. As a rule, the speaker begins quietly, gradually *waxes* more and more eloquent, and winds up in a passage calculated to "*bring down the house*."

WHEN TO STOP

It is astonishing to find that even practised speakers do not always know when to leave off. The speaker who is up to his work can detect in a moment when he is about to lose grip of his audience, and if he be wise he will promptly perorate and sit down. If he be otherwise, his hearers will not fail to give him indubitable proof of their satiety. The speaker should never become enamoured of the sound of his voice. That is a golden rule.

A preacher in the United States after a tiresome sermon on the Greater Prophets proceeded, to everybody's horror, to consider the Minor ones.

"And where," he asked in moving tones, "and where, my brethren, shall we place Hosea?"

"You can place him here, sir," shouted an irate worshipper, as he briskly smacked his chair, "I'm off!"

Some audiences are like a musical instrument from which an accomplished player will draw the most exquisite harmonies, while a bungler will only produce sound and fury and dissonance. On two separate occasions Thomas Babington Macaulay, who was far from being an ideal speaker, prevailed upon the House of Commons, by the cogency of his arguments, to reverse its vote, and William Ewart Gladstone, who was an ideal speaker, converted a hostile open-air meeting on Blackheath by the magic of his beautiful bell-like voice and the heroism of his demeanour.

Speakers should not trifle with their audience, which is quick to resent other things besides prolixity. Any attempt to "show off," as by freely interlarding the matter with phrases from foreign tongues, is sure to be guyed; while high-flown flowery oratory or an anti-climax will provoke

He is a sound speaker who keeps well within the bounds of his own capacity. That is why an easy conversational style is so frequently effective. The audience recognizes that the speaker is a sensible man who is likely to address to it things worth listening to. Such a man, more often than not, begins with a joke, or cleverly tells a funny story and the meeting is

speedily on good terms with itself and the speaker.

GESTURE

Appropriate gesture helps a speaker wonderfully. Most speakers don't know what to do with their hands, though could they see themselves as others see them, with their arms hanging listlessly by their sides and themselves looking like partially-animated wooden figures, they would make a serious effort to study gesture. It is said that no one managed his hands so well as Charles Bradlaugh did, and no doubt the long and varied experience he had of addressing open-air and other gatherings, sometimes stormy, stood him in excellent stead in this respect. There is, of course, a medium in all things, and it never answers to be melodramatic off the stage. Transcendent orators have occasionally tripped by overacting. We know that when Edmund Burke flung a dagger on to the floor of the House of Commons in defending the Alien Bill, and Lord Brougham beseeched the House of Lords on his knees to pass the Reform Bill, they only excited uncontrollable laughter. Every speaker should study Hamlet's advice to the players. Thus he will learn that he must not "mouth" his speech, must "not saw the air too much with his hand," must not "tear a passion to tatters," must "suit the action to the word, the word to the action, with this special observance, that you o'erstep not the modesty of nature," must understand that anything overdone will "make the unskilful laugh" and the "judicious grieve."

AFTER-DINNER SPEAKING

It goes without saying that one must adapt one's speech to circumstances. You will sometimes hear it objected of a speaker at a public meeting that he was "too preachy," that is, that his style of oratory was not suited to the occasion. But there is one class of social functions that demands a particular type of speaking. Dinners, luncheons and the lighter sort of social gatherings consume a vast amount of oratory, but after-dinner speaking is really an art in itself. Lord

Rosebery is, by common consent, a master of the art, and his speeches may be taken as perfect models of this kind.

Yet in spite of these fairly obvious considerations, it is the exception to find toasts and replies assigned to men capable of adapting their remarks to the prevailing mood, and the trouble is increased rather than lessened by the artless habit of drawing up far too long a toast-list, as if there were a plethora instead of a scarcity of capital after-dinner speakers. Five toasts with the corresponding replies ought to suffice for most dinners, but it is within the mark to say that usually they are twice as numerous.

Assuming that an excellent dinner has been served, the speakers are so far fortunate in having an audience already attuned to welcome a speech conceived in the right vein. Speaking generally, ambition to shine is distinctly out of place. The occasion calls rather for a homelier wit, for persiflage, banter, and the lambent play of a light tongue, with brevity as a prime essential. One would wonder how any one could miss his cue, were examples to the contrary not so dismally, so painfully in evidence.

Take the loyal toast as a case in point. Nothing could be simpler than to say—as is the absolutely "correct" form—"Gentlemen, 'THE KING!'" But in innumerable instances one listens (in pity) to a worthy citizen laboriously reciting the chief events of his Majesty's reign, or rehearsing facts culled from the Court Circular which were doubtless read in the morning papers by everybody in the room. Such an error in taste can only be caused by sheer ignorance or a puerile desire to cut a dash.

By convention it is *de rigueur* to refrain from smoking until the loyal toast has been honoured. Sir Robert Cranston, when he was Lord Provost of Edinburgh, was responsible for an innovation which won unanimous approval. During the dessert silence was called and glasses were asked to be charged and the King's health was proposed in proper style and warmly acclaimed. The new departure possessed two advantages. His Majesty's

toast was given during perfect quietude instead of that atmosphere of subdued noises which sets in after the tension of the dinner and dessert is relaxed and the diners were at liberty to smoke whether there were an interval or not.

Since at all ordinary banquets the desired note is that of entertainment, dull and heavy speeches are mistimed and misplaced. Even when the toast of the evening is reached the aim should be reasonable brevity and a light touch—save when, as in the case of a charity, this would be out of place as savouring of the flippant or frivolous. Unquestionably there are times when the tone must be sincere and serious even at a purely social affair. It would be an affront to the chief guest if, at a complimentary dinner to him, his virtues were descanted on in an airy fashion and his merits touched on so lightly as to render them nearly impalpable. But, putting it broadly, every attempt should be made on the part of all the speakers to lay the demon of dullness which has had, and still has, such a blighting effect on too many festive gatherings.

It must not be supposed that dinners are the sole functions at which the speaking should be agreeable and amusing. Mrs. Grundy is said to have prohibited the custom of speechifying at wedding breakfasts or receptions. She will next object to the time-honoured practice of toasting the heir at coming-of-age ceremonies. Most folk, it may be guessed, will hold to ancient and friendly habits in spite of the good lady. What earthly harm can there be in a few remarks of kindly encouragement and Godspeed to a young couple at the outset of their life's journey together? The toast must be proposed in good taste, should on no account be lengthy, and care should be taken to dwell on the amiable points in the characters of both bride and bridegroom.

DUTIES OF A CHAIRMAN

Many people think that the duties of a Chairman are more or less matters of form and that he is a sort of figure-head. In point of fact, an efficient Chairman is as necessary to the smooth

working of the meeting he presides over as is an accomplished accompanist to the rendering of a violin solo or a song by Schubert. He need not be a good speaker,* for a loquacious president, who has no one to keep him in order, may easily become a nuisance. He ought, as a rule, to speak briefly, relevantly and to the point and, for the rest, has to control the speaking of others and promote the successful issue of the assembly. He should be a man of tact, judgment, and temper, able to come, if need be, to a sound decision on the spur of the moment.

In committee business a Chairman's functions are comparatively easy. He will set an example to his fellow-members by being both regular and punctual in attendance and always begin proceedings at the appointed hour, provided, of course, a quorum be present. It is usual to permit of a good deal of the conversational style of transacting affairs and, within limits, this is indeed unavoidable.

A PUBLIC MEETING

At a public or other general meeting, however, "Mr. Chairman" must be alert and businesslike, thoroughly good-natured, temperate and impartial, but always master. The order of business has been fixed by long usage, and it is the Chairman's duty to carry it out *au pied de la lettre*. The routine of an ordinary public meeting may be briefly sketched. The Chairman will begin by a short and straightforward statement of the objects of the meeting, set forth succinctly his own views, and then call upon the first speaker (already chosen) to propose a resolution. When this has been done, he will require a seconder (probably already chosen also), and allow no one to speak until the resolution has been formally seconded. At this stage it is customary to put up the "lion" orator (if one be present) to speak in support of the resolution. Then the matter will be put to the vote and the result announced by the Chairman.

Fortunately most meetings lend themselves to tactful management and pass off uneventfully. But if some opposition be threatened the Chair

may have a lively time. In all cases, however, he must stand firmly by his ruling, and see that it is acted upon.

PUTTING AN AMENDMENT

The customary method of displaying difference of opinion is for a dissident to propose an amendment to the resolution. The Chairman must remember that this is a right inherent in every public meeting, and indeed every meeting to which any resolution is submitted, and that he is powerless to refuse an appropriate amendment. But he must see that the amendment is really an amendment. If a speaker declare his intention of proposing a direct negative as an amendment, the Chairman will rule that out of order. For, obviously, the direct negative of any proposition is a rejection not an amendment thereof. Further, an amendment that raises a separate issue from that of the proposition cannot be entertained as valid, since it really partakes of the nature of an entirely new proposition. An amendment having been moved must be seconded, else it will fall to the ground without further notice. But if everything be properly carried out, when it comes to voting on the resolution and amendment, the Chairman must put the amendment first. If it be carried, the amendment must be put again as the substantive resolution, and it will now be competent to move an amendment to it. But should the amendment be rejected, it will still be open to any one else to propose another, though generally it is unusual to push hostility to such an extreme, most meetings being, at this stage, satisfied to allow a vote to be taken on the resolution.

Should there be more resolutions to submit to the meeting, a similar routine must be gone through with each; but when time begins to run short the Chairman can fix a limit to the speeches (say, five or ten minutes to each) and may even find it imperative to disallow any speeches except such as are necessary (those of movers and seconders). All the business having been transacted, a vote of thanks to the Chair usually terminates the proceedings.

(This, too, will have been provided for beforehand.)

SOCIAL FUNCTIONS

Chairmanship at social functions is less strenuous. At such affairs the Chairman commonly has to call upon the different toast-proposers and to announce the vocalists and other *artistes* with the name of the song, piece, or whatever else it may be that is to be offered to the company. His actual speechifying should be brief, on the whole, and neat and pleasant in expression. Without showing his hand too freely, he must guide the course of the entertainment so that the end shall be reached at a reasonable hour. Moreover, he must be at special pains to "ring down the curtain" while things are still going strongly and not wait until they have begun to drag and the audience are either slipping away in ones and twos or visibly or audibly yawning. Often an extra half-hour will make all the difference between an enjoyable, it may be even a brilliant evening, and a function that every one feels has been a failure. It is true that the arrangement of a programme does not fall within the Chairman's province, but for the due execution of it he is almost wholly and necessarily responsible. Therefore he should not hesitate, in the general interest, to exercise the privileges that belong to his office. It is frequently possible to confine the proceedings within decent limits by disallowing *encores*, by jocularly inviting speakers to cut their remarks short (himself almost ostentatiously setting the example), or by asking the company and those immediately affected, because of the lateness of the hour, to allow him to curtail the programme.

DEBATE, AND HOW TO CONDUCT IT

Facility in public speaking can best be acquired by frequent practice. One cannot learn it from books as one might a language. Beginners, therefore, are advised to join a parliamentary debating society, or local parliament, which

is an excellent school. On many grounds it is a pity that these institutions, once numerous, have been allowed to die out in several towns, for they not only accustomed the members to the intricacies of discussion, but fostered an interest in the questions of the day and so, apart altogether from party politics, had a distinct educational value. In districts where these bodies are not in existence and cannot be founded, there may be minor societies—such as "mutual improvement" associations—at which papers are read, followed by debate, and these, for want of anything more suitable, offer an opportunity for exercise of which novices might avail themselves.

Local parliaments follow, as far as is feasible, the routine observed in the House of Commons. A member, therefore, can always ascertain beforehand what subjects—in the form of Bills or resolutions—are coming up for debate. Suppose he wishes to take part in an early debate, what must he do? First of all, he must get up his subject, making full notes. Then he will study these and arrange his thoughts in logical order, keeping in mind that he will be either supporting or attacking a measure before the House, unless, indeed, he undertake to introduce a Bill, in which case his remarks will be largely of the nature of an exposition and consideration of his theme from various points of view. If he commit his intended speech to writing, he must remember that he will have to trust to his memory, for it is against the traditions of the Imperial Parliament to read a speech, though real M.P.'s have been known to use such voluminous memoranda that the custom alluded to is almost as much honoured in the breach as in the observance. On the whole, he had better get into the way of depending on notes rather than upon a verbatim text, conned by rote, for he will the sooner acquire the self-confidence which will enable him to share in a discussion for which his only preparation has been the notes actually made during the progress of the debate.

SPORTS AND OUTDOOR GAMES

BOXING

Boxing is a sport in which two men indulge in "fistic manœuvres," their fists clad in light leather gloves which are thinly stuffed and weigh between 4 and 6 oz. What was once a purely pugilistic practice has now become an indulgence of playful fighting. The opponents stand facing each other in an open space, 24 ft. square, which is called the "ring." The ring is bounded by two ropes at a height from the ground of 2 ft. and 4 ft. respectively. The players, or boxers, spar in a series of "rounds"—a series which is ended only by one of the men being "knocked out" by his opponent; unless it is mutually agreed that the fight should cease and be called a draw. The "rounds" are each of three minutes' duration, with an interval of one minute between each. Boxing is an art in which strategy is keenly trained.

In a match where the "knock-out" is not attained, a decision is given on points, according to the number of hits each boxer makes, although the work of the left hand has always the preference. With boxers fairly well matched and weighing under nine stone it is rarely that one of them is "knocked-out," so the fight goes the number of rounds agreed on. A knock-out blow is generally inflicted upon the point of the jaw, the heart, or the pit of the stomach. A man may be knocked down and rise almost immediately to continue the fight; but the rules of the game provide that if a man does not rise to the fight within 10 seconds, the man who remains standing is declared the winner.

Fairly free hitting is allowed in the game, but the Queensberry rules, under which all boxing contests are conducted, provide that hitting below the

belt is foul play, and the boxer indulging in such practice is disqualified.

FENCING

Fencing is the art of attack and defence by means of sword, singlestick, rapier or foil. As practised in the gymnasium it is a game that is indulged in by two persons at a time, standing opposed to each other. It is necessary that the face, hands, and vital parts of the body should be guarded. For this purpose are used leather coats and aprons, and meshed masks. In the case of foil fencing it is essential that the tip of the weapon is guarded by a leather or india-rubber button. No form of attack is allowed but the "thrust" or "lunge," save in the instance of fencing with the singlestick, when a downward "cut" at the head is permissible. The movements in the play are as follows:—When "on guard" the body is presented to the opponent, as it were, in profile with the right foot forward and the right arm, which holds the sword, bent at the elbow and about 10 or 13 inches from the body. The left foot is firmly placed about 20 inches behind, and is at right angles to the forward foot.

The first action in a fencing bout is the feeling of the blade. By "feeling the blade" is meant the bringing of the weapons into contact, and by exerting practically no pressure it is possible for each player to divine in which direction an attack is to be made by his adversary.

This action, too, enables the fencer to get his body well balanced. He must keep himself erect upon the hips, slightly inclining to the left. Straightening suddenly the right, or sword arm, the attacker stamps his right

foot forward, the whole body bends forward to his opponent, and thus is effected the "thrust" and "lunge."

The thrust may be parried by the defender slipping his foil under that of his opponent's and by an outward turn of the wrist thus sending the attacking sword away perpendicularly and following immediately by an attack. This movement on the part of the defence is called a "riposte." A "counter-riposte" is an attack immediately following the parrying of a riposte. A "time-thrust" is similar to the cross-counter in boxing; it parries a thrust by a thrust. Attacks may be delivered on the "breast," or the "right" or "left" (of the body or face) and "below" (the region under the sword arm).

An attack may be a combination of one or any of the following movements directly preceding a lunge; to change from one line of attack to another by passing the sword under that of your opponent is to "disengage"; to "cut over" is to effect the same change by passing over instead of under; "one two" is a double disengagement. When a second thrust is made before the attacker springs back to guard against a possible riposte, the move is called a "reprise"; but if meant to take advantage of a wide parry not followed by a riposte, the move is then called a "remise."

To meet all attacks there are, at least, ten forms of parrying indicated by the Old French ordinal numbers. These parries are called *prime, seconde, tierce, quarte, quinte, six, sept, octave, counter-tierce, counter-octave.*

JU-JITSU

Ju-Jitsu is the practice of self-defence according to a method introduced to this country by the Japanese. It is a method in vogue to a great extent amongst the police force and all gymnastic societies.

Ju-Jitsu is a system of wrestling, as simple in its accomplishment as it is complicated in its acquirement. Briefly it is a series of tricks which cannot be explained in detail here. A knowledge of anatomy is essential to the athlete who wishes to become

an adept in Ju-Jitsu. The secret of the success gained by its followers lies in the knowledge of how to grip a muscle or bone of your opponent without having to "feel for it."

By the tricks of the game of Ju-Jitsu one is able to disable an adversary in a simple way, such as the clutching of a limb or the clasping of a joint, by which a tendon may be strained or even a bone broken.

WRESTLING

Wrestling is a sport in which one person tries to throw another down. The many different styles or systems of the sport involve a multiplicity of minor rules, though, in general, the object of the game is the same. The winner is declared when he succeeds in putting his adversary upon "the mat" with both his shoulders touching the ground simultaneously. This is known as a "pin fall," but in some contests a "rolling fall" is allowed, so called when the two shoulders have touched the ground, but not simultaneously.

In the Graeco-Roman style, "tripping," which is distinctly of the English school of wrestling, is barred. The result of the struggle depends almost entirely upon the superior strength of muscle and endurance in the winner. In this respect the Graeco-Roman style is similar to the Lancashire method, popularly known as the "Catch-as-catch-can" system. In this style the wrestlers are allowed great scope. The struggle really commences when both wrestlers are on the ground. The Cornish style of wrestling decides a winner when he throws his opponent flat on the back, with two shoulders and one hip or one shoulder and two hips on the ground.

The Cumberland and Westmoreland is the method with the simplest rules and yet demanding the most science, as opposed to brute strength. In this system the wrestlers stand up, chest to chest, each man putting his chin upon the right shoulder of the other, his left arm clasping his adversary's body outside his (the adversary's) right arm. The struggle is continued, standing, the lower being

declared when he "breaks hold" or touches the ground with any part of his body.

BOATING

Boating is a sport practised on river, lake and sea; and in each place, though the principle is the same, the execution differs greatly. The propelling of oneself upon the surface of water is effected by means of oars, the movement being accomplished on the principle of leverage. On the sea the boat is propelled by "a steady pull and a strong pull," the blades of the oars being kept well under the water—at a greater depth than would be the case in river or lake boating. On water that is not excessively ruffled by waves, the correct style differs considerably, and boats that could not possibly be used for sea rowing are very popular on lake and river. In each case, the several parts of a boat are known by the same names. The stem is the fore part, and the stern the hinder part of a boat. The keel is the projecting ledge running all along the bottom of the boat and is the part lowest in the water. The gunwale is the upper edge of the sides, running all round the boat. The rowlocks are the places in which the oars are worked. The back part of the rowlock is called the thole pin, and the foremost part the stopper. The thwarts are the seats for the rowers, and the stretchers the boards placed slantwise on the flooring of the boat and against which the rower places his feet. The rudder is the wooden tail piece by which the boat's course is directed.

Canoeing.—The canoe is a curiously shaped boat pointed at stem and stern in the same way. It is built as a rule to seat one or two persons. No rowlocks are attached to the canoe, and the occupant makes progress through the water with either a double-headed paddle or a single-headed one. With the former the canoe is propelled with a stroke either side alternately, but with a single-headed paddle the canoe can be worked from one side. Although the latter art is more

intricate than in the other case, it is certainly the more popular, and on a crowded piece of water a canoe can be manipulated far easier than any other craft. The canoeist must, of all things, be careful to maintain a steady balance whilst paddling.

Punting.—No sight on the river is uglier or more ridiculous than a man punting badly; and no picture is prettier than a punt being gracefully propelled by an artist in punting. The punt is a low, flat-bottomed boat of which the stem and stern are not pointed, but rise in a square-ended, gentle slope from the keel. The art of punting consists in remembering and adhering to these chief principles: hold the punting pole with a loose and easy grip which nevertheless gives complete control; do not depend for your balance by leaning upon the pole; do not dig the pole into the bed of the river with too great force; let all your movements be decisive, but absolutely void of jerk or spasm.

Sculling.—To scull properly one must certainly be able to row first. The actions are much the same, only that in sculling you use a pair of sculls—one managed by each hand. You sit facing the stern, your feet against the stretcher, and take the sculls in your hands. The sculls should not be held in the fist but rather in the fingers, the thumb capping the top of the scull handle and not curled underneath in a clasp. The body must be swung forward, the arms outstretched—thus throwing the sculls, which fit in the rowlocks with the button inside the thole pin, backwards on the surface of the water. The legs must open at the knees to allow the body a freer swing. The sculls are now lowered into the water by a slight raising of the hands. Both sculls must be lowered exactly at the same time. Then the "stroke" begins. The oarsman spends his strength from the shoulders and hips and pulls backwards, keeping his arms rigid until the body is again upright, when he completes the stroke by bending both arms at the elbow. He must, however, keep the forearm as much as possible parallel with the surface of the water. As the hands reach the chest

they should be dropped a couple of inches, and so bring the scull blades out of the water. To renew the stroke, the hands should be sharply turned at the wrists—knuckles upwards, towards the body—and the arms, again extended, are thrown out rigidly as before, and the body bent forward ready for another stroke. This action sends the blades back over the surface of the water, and is called the "feather." Then by a lifting of the hands and a turn of the wrist the blades drop again to the water and the "recovery" is made, the oarsman now being able to continue as before.

For sculling purposes the outrigger is the best kind of boat. It is extremely narrow at each end and in the centre just wide enough for a single sculler to be seated. The rowlocks are not fixed to the gunwale, but supported from it on irons that reach out over the side of the boat. Outriggers are generally built with a sliding seat, which naturally allows a much more powerful stroke than if a stationary seat were used. As he begins a stroke, the oarsman presses his feet against the stretcher and the sliding seat carries him backwards. In feathering, he releases the pressure of his feet against the stretcher and the spring carries him forward and he is ready for the next stroke. Though racing boats are always built as outriggers and equipped with sliding seats, outrigger scullers are to be had to carry more than the sculler himself and for pleasurable boating there is nothing to excel the outrigger managed by a man who knows how to scull.

Rowing.—By rowing, as opposed to sculling, is generally meant the management of one single oar by the pair of hands.

Probably no other sport has so much hard work attached to it as rowing, when applied to racing. The action of an oarsman is similar to that of a sculler, only his mind is concentrated on the management of one oar instead of two, and to a perfect uniformity of motion with the other men in the boat. There are many different styles of racing boats. Some hold two oarsmen

only, others two oarsmen and a coxswain, others four oarsmen and a coxswain; but the most popular of all is the boat which holds eight and a coxswain. This craft is propelled by four oars on each side, the stroke side and the bow side. The stroke is the oarsman who regulates the speed of the boat, and for a boat to attain any speed each of the oarsmen must begin and finish his stroke at the same time as the man in front of him. In a race the oarsmen row between thirty and forty strokes per minute, and with an efficient crew the boat will attain a speed of twelve to fifteen miles per hour.

SAILING

Of all the water sports undoubtedly the most exhilarating is that of sailing. Briefly, sailing is the propulsion of a boat by the wind, brought to bear upon large sheets of canvas spread out from the mast of the boat and manœuvred in such fashion as to catch the full strength of the wind. These sheets are called sails. It is necessary to have one large sheet and a few smaller ones all arranged and hung so that they catch the wind at all angles.

Sails may be rigged on any kind of boat that is fitted with mast and rudder. The direction of the boat is decided by the rudder, which is controlled by a stout pole from the stern. This pole, called the tiller, is so fixed to the hub of the rudder, that when it is moved to the left the rudder moves to the right, swaying the boat in that direction.

It matters not from which quarter the wind blows, by the aid of the tiller a boat may be turned in any course. The sailing man who sits in the helm must be wary of the motions of the boom; for when the edge of the sail is swung to the wind, and the sails are "shaken," this process—known as tacking—is likely to result in the sweeping overboard of any one who happens to stand in the way of the swinging boom.

Of the boats which are used for pleasurable sailing the swiftest, and at the same time the most pleasant in its management, is the yacht. Sailing yachts are built with exceptionally deep keels, and massive sails.

With such immense space of canvas for the wind to play upon, a yacht would be utterly blown over but for the heavy heel. Even with such weight as ballast, a yacht, before a strong wind, frequently has its mast sent well over to leeward, so that the top sail almost touches the water. One of the most important rules to be adhered to in sailing is the avoidance of "broaching to." To "broach to" is to present the side instead of the head of the yacht to the waves. The allowing of a boat to be put in such a position may result in serious consequences no less disastrous than the vessel getting swamped. Another rule to be borne in mind in sailing is that moving about recklessly in the boat is fraught with danger. No one should ever try to manage a yacht unaccompanied by an experienced sailor, and in all cases the beginner should be guided by the man of experience.

MOTOR-BOATING

The charm of boating in motor-launches chiefly consists in the fact that machinery supplies the motive power and that a very fine speed is attained with but little manual labour.

Motor-boats are driven by steam or petrol or electricity, the engines being deep in the hold of the vessel. The motor boat is built in various sizes, but is generally of about the capacity of a good-sized skiff. To the class of motor-boats may be added the hydroplane, a boat which in shape is like a rectangular box. The weight of the motor in the stern keeps that part of the boat well under water, whilst the fore part is clear above the surface. The hydroplane is capable of very high speed, and is used for racing purposes.

FISHING

Fishing in the sea is entirely different from river fishing or lake fishing. The rod is not used as much in sea fishing, and the line is of greater thickness than the fresh water line. It is stout as whipcord, and the baits used are pieces of fresh-caught fish, mussel, crab and lug worm. When a bite is observed the line is hauled up by a quick but steady hand-over-hand

movement. Sea fishing as a sport should best be conducted from a boat or jetty head, where the fisherman has a position directly over fairly deep water, enabling him to drop the line perpendicularly.

Lake and River Fishing is quite another kind of sport. The angler must have a far more elaborate equipment than is necessary for sea fishing. The first essential is a rod, of length varying from 12 feet to 20 or 30 feet. Attached to the butt end of the rod, which is made of some light, strong wood such as hazel, ash or hickory, is a brass reel called the winch. About this reel is wound a length of cord which is carried to the point of the rod through tiny eyelets. At the end of the cord or "line" (which may be let out or pulled in by the winch at will) is fixed the hook, to which is attached the "bait."

The angler chooses his bait, either of worm, paste or fly, according to the kind of fish he intends to seek.

All baits, both artificial and natural, should first fall gently into the water before any part of the line touches it; nor should any more of the line than can be avoided ever lie on the surface of the water. In float angling the line should be two or three feet longer than the rod in river fishing and as much shorter for standing waters. In the former, cast the bait under-hand as high as possible up the stream; let it be carried down as far as the rod and line will permit with the angler following it, and then let him, as he removes, cast it up again. In a pond angle near where the cattle go to drink. Places where there are old stumps of trees or weeds harbour fish in great numbers. When a good fish is struck the rod should be kept bent. The strength of the rod or line for "landing" the fish should not be depended upon, but the "net" should be resorted to. In fly-fishing the line may be touched sometimes to draw the fish nearer.

Tieklng is the art of catching fish by groping for them in streams, without the use of rod or line. The angler wades into the water and cuts off the trout's retreat by building barricades or placing other stones around

the one under which the fish hides. He then feels with both hands until he touches his capture. A slight pressure against the body of the fish is increased until trout is close against the stone, when it is gripped and brought out.

SWIMMING

Swimming is the propelling of oneself in water. The first thing to learn in swimming is to float. Floating is quite a natural action and is accomplished by first wading into water just above waist depth. The body is then bent backwards, bringing the swimmer on to his back. He then throws out his legs, heels together, stiffly. The head is thrown well back, and the arms, wide apart above the head, with the palms of the hands held open and flat under the water. Progress through the water may be made by paddling gently with the hands, keeping the arms well against the body. To swim on the back the bather should pull the feet up together to the body and then kick outwards, bringing them together again with the legs stiff. This action pursued sends the swimmer along, head foremost, at a fair pace. To increase his speed, the swimmer may use the hands and arms to advantage. He lifts both arms simultaneously from the water and throws them backwards behind his head. The hands cut the water sideways and are then pulled up to the thighs just below the surface, the palms turned bodywards.

Swimming Strokes.—The motions of a swimmer through the water are described as strokes of which the most easily acquired and generally used is the "breast stroke." To accomplish this stroke the swimmer first stands in his depth in the water and brings his hands forward to the chin, palms together. At the same time as he makes his next move in the "stroke," thrusting his arms out before him with the hands still together, he kicks his legs out horizontally with his body, which he throws forward upon the water. Then, turning his hands with the palms slightly inclined outwards, he brings them back till the arms are horizontal with the shoulders, at the same time bringing in the heels together

as he drops the elbows. He thus fetches the hands up to the chin in the same position as at the beginning of the stroke. The head is kept upright, and well back throughout the stroke, the breath being expelled as the hands are thrust out and inhaled during the gathering up of legs and arms. The strokes should be continued regularly, the breathing consistently, and thus progress is made.

The Side Stroke.—This stroke is attained by the swimmer pushing the one shoulder (for illustration, say the left), forward, and shooting the left hand straight out in front of the head and pulling the water to him, whilst with the other hand he urges the water away from him. Greater speed may be attained with a side stroke in which an overhand movement is employed. The swimmer is on his side (the left) and he kicks out strongly, while his hands meet palms together beside his face. With a quick motion, he thrusts the left hand out to the full length of the arm, at the same time drawing the right hand, scoop fashion, through the water towards the hips. The left hand is then drawn in to the body as the right arches out of the water, and is brought to meet the left at the face to begin the next stroke.

The Hand-over-Hand Stroke is one in which both hands play alternately the function of the right in the side stroke. Between the motions of each hand the legs are kicked out as in the breast stroke, the body being in the same position.

The Trudgeon Stroke is the one adopted and favoured by most professional swimmers. In form, it resembles the hand-over-hand with this difference: the face is kept under water, and taken out to inhale breath between alternate strokes, the breath being expelled during the trudge. The arms, too are kept bent and have more of a circular movement than in the hand-over-hand. Once the swimmer has control of his movements he is able to adapt and vary innumerable strokes, either on back, breast, or side.

DIVING

Diving, which in the sport of swimming simply means the act of entering

the water suddenly or precipitately, is practised in two main forms: head first or feet foremost. Let it be supposed that the diving novice is already a competent swimmer. He is standing at the edge of a pool or upon a diving board in a swimming bath, a platform erected a few feet above the water. The swimmer is about to take a "header." The arms are outstretched above the head, hands with palms together. Legs are held tightly together, the heels touching, the toes apart. Bending the knees, but keeping the body erect, the swimmer springs forward, throwing the feet backwards with the toes turned up. The action is guided by will as much as by muscular energy, and the swimmer will find that he naturally enters the water at a spot which he has marked with his eye, provided it is within reasonable distance from the diving board. The moment the hands touch the water, the fingers are bent upwards towards the surface, and the wrists turned again, with the palms flat. The spine too is bent back and upwards. The legs are kept stiffly posed through the whole action. This brings the swimmer to the surface in a floating—face—downwards position. He then strikes out in any stroke he likes, lifting his head above the water the while. The swimmer must, above all, remember to keep his body stiff and to throw his legs well up behind him on the spring, or he falls in a doubled up position, resulting in most irritating consequences.

Of course there are many ways of holding the hands at the dive, such as locking the thumbs and keeping palms faced outwards. The essential is that the hands cut the water for the head, especially in the case of high diving. The legs, too, may be thrown out loosely, provided they are kept well up at the spring, but the neat and clean dive is only accomplished by the stiff limb and body.

In the jump dive, i.e. entering the water feet foremost, the action is that of the ordinary land jump, and is best practised in the attitude of attention gained when off in the air. The swimmer keeping this attitude will find bottom in very deep water, when he may easily rise, and suddenly. By

springing up or bouncing from the impact. To keep near the surface in the jump dive, the swimmer, as his feet touch the water, doubles up his legs under him and puts out his arms horizontally to the shoulders. By such an action he may be able to effect a jump dive without even getting his head immersed. Like swimming strokes, the styles of diving may be varied and adopted according to the swimmer's taste. Once he gets the principle of the dive well controlled he is able to invent all kinds of trick diving, which is one of the most pleasant phases in the sport of swimming.

WATER POLO

Water polo is a game played in the water with a ball similar in shape and size to an Association football.

The game is played by seven aside, and the object is to score goals. A goal is scored by a player hurling the ball into the net at either end of the "field of play," which is usually about 20 yards in length.

The method of lifting and hurling the ball from the water is difficult of acquirement. The player places his hand upon the top of the floating ball and presses it downwards. The ball is pressed down behind the swimmer, who then turns his hand—away from the body—bringing it under the ball, which at once rises to the surface. In its rise, it is held and guided by the hand and is brought to the shoulder, when the hand is forced upwards, hurling the ball in the direction required.

RIDING

The retaining of one's seat upon the back of a horse in motion—either in saddle or without—is an art that depends more upon balance than grip. It is well to practise riding without saddle first, then later with saddle, and last of all with saddle and stirrups attached. The reins which the rider takes in either hand serve as much as a support to him as a guiding force to the animal. These are held between the fingers with a light pull upon the horse's mouth. When the equestrian wishes to turn to the right, an

extra force urged upon the right rein, by a turn of the wrist or twist of a finger, will make the horse go to a right direction. And so with the left. A left pressure turns the animal in the direction so desired. The arms are held so that from the elbows to the hand the arm is horizontal, the elbows touching the body. The rider must not stand in the stirrups nor depend entirely for his support either upon them or upon the reins. The muscles of his body must not be strained, but allowed to lie easily and naturally and "lissom." The heels of the rider should be in a perpendicular line with shoulders and elbows. The legs must not be shifted, but as little as possible, from that position. The small of the back is slightly hollowed, the head and shoulders held back and erect, the chest forward, and the whole body balanced naturally, its motion swayed by the movements of the hips which are ruled by the promptings of the animal on which he is mounted.

For lady riders, specially built saddles are used. They are fitted with "lower" and "upper" crutches. The rider places her right leg over the upper crutch, with the left foot in the stirrup. Her chief weight is upon the right leg and she sits squarely in the saddle. The only occasion when she may "stand" in the stirrup is when going at a trotting pace.

POLO

Polo is a game of four aside, played on ponies in the open field, and is one of the oldest games in history, although played in this country only some fifty years. An advantage is gained by one side over the other when a wooden ball, about twice the size of a cricket ball, is driven through the goal post by means of curve-headed mallets. In many respects the principles of the game of polo resemble those of football and hockey.

The goals are usually 250 yards apart. The "back line" is one drawn across the width of the ground at the extremity of each end of it. Two posts are fixed 8 yards apart in the centre of the back line. The posts vary in height from 10 to 12 feet, and each is surmounted with a flag. The line

between the posts is called the goal line. The "30 yards line" is drawn in front of, and parallel to, each back line, and 30 yards from it. The "centre line" is drawn across the ground dividing it into halves. The players take the numbers, 1, 2, 3, and 4, and arrange themselves on either side of the centre line, each number facing his opponent of the same number. The "number 4's" or "backs" ride behind the three other players, and about 10 or 15 yards nearer the goal line.

The flour of play is divided into "chukkers" of 10 minutes each, with an interval of 3 minutes at the end of each period. At half time—the end of the third period—the interval is 5 minutes.

TRICK-RIDING

Trick-riding is practised on horses and ponies bare-backed by only experienced riders. The horse must be thoroughly broken in and used to its rider. Sometimes the sport is indulged in with the horse bridleless. The rider runs beside the horse, which is travelling at a fair canter, and leaps on to its back, gaining a standing position. All sorts of pranks may be played during a canter or trot, and the practice makes a good gymnastic exercise; but this sport is practically confined to professional performers.

Ring Tilting is a game where a ring a few inches in diameter is hung upon a hook with the point facing in the direction in which the horse is running. The rider gallops up swinging a sword or singletstick, and attempts to lift the ring on the point of his weapon. If he merely knocks the ring off its perch he makes no score. But when he carries off the ring, which if caught properly slides down his uplifted arm, he scores one point.

Tent Pegging is a game in which the rider carries a sharp-pointed and stout lance. He gallops towards a peg—of the kind used for the fixing of tent ropes—which is fixed into the ground very firmly in a sloping position. With his lance he aims and drives at the object, and if he pierces it correctly, pulls the peg from its place

and carries it off affixed to the end of his lance.

The Turk's Head makes excellent sport for fast and sure riders, at the same time giving good cutlass exercise. A number of dummy heads are fixed on poles about 6 feet in height. The poles are arranged in a line parallel to the direction in which the rider travels. Sometimes a double line of poles is arranged, the rider galloping between. His object is to slash off as many "heads" as he can in one ride through the army of poles. As he starts his gallop, the rider swings and drives and thrusts with a cutlass, which exercise is put to practical use when he meets the dummies. Left and right, cut and thrust, he slashes at the heads, his score being a kind of capitation count according as the number of heads he entirely separates from their fixtures.

Lemon Cutting is a good test of swordsmanship. A number of lemons are suspended by string from posts and arranged in a straight line. The posts are about twenty yards apart and the lemons suspended about six feet from the ground. The rider gallops along the line of posts and cuts the lemons in two with his sword. He scores according to the number of lemons he cuts. These four branches of horsemanship are very popular in the army.

ARCHERY

Archery is the art of shooting with the bow and arrow. The bow, made of light wood, is in appearance a long cane of which the ends are pulled together by a stout cord, thus forming an implement of the shape of a segment of a circle. The arrows, generally made of ash, are pointed at the one end, and have at the other end a head of feathers fixed. Of the many modes of quitting the arrow from the bow, the best and most generally used is the following:—

The bow string is drawn back with the first and second fingers only, the head of the arrow being lightly held between those fingers. The balls of the fingers cling to the string, the finger tips slightly bent inwards. The thumb, which takes no part in the

operation, is held out straight away from the string and the arrow. The bowstring should be released without a jerk. The more steadily it is released and the more firmly the bow is held, the more safely is assured a straight and a long hit.

For archery matches, targets are placed from between 50 and 100 yards from the scratch point where the bowman stands. Targets are generally about 4 ft. in diameter, having in the centre a gilt patch a few inches across. Surrounding this centre piece, or bull's eye, are rings painted in brightly coloured hues. According to the arrangement of the colours, the scores to each player are counted. The winner is the one who gets his arrows in with the highest score in the aggregate. For instance, 9 counts when an arrow hits the bull; 6 for a red, 7 for a blue, and so on according as the rings are remote from the centre.

The weight of a "bow pull" should average about 30 to 40 lbs; but for shooting greater distances bows sometimes have a pull of 60 lbs.

BADMINTON

Badminton, a game played with one or two aside, is in many respects akin to tennis, except that the tennis ball is replaced by a shuttlecock. The bats, too, are rounder in shape and fitted with long handles. The game is very simple, consisting of hitting the shuttlecock over a net—placed between the opposing players—and back again. The ground is marked out similarly to a tennis court. Four is the best and most generally selected number of players. Each player holds a bat or battledore, and one, who is for the time called the server, throws by hand or bounces from his bat the shuttlecock into the opponent's court, server's court and receiver's court being diagonally opposite. The opponent hits the shuttlecock back, and if he fail it, counts a score to him. Should the shuttlecock fall into the wrong court on serving, it counts a score to the server and he falls out of play, not returning in that same round. His partner then serves, and when he is out the round is completed,

and all players return to a new service. When a player fails to take the shuttlecock or to hit it back over the net, he is out of the round. A game is 15 points, the scores being counted in the following scheme: one for a miss; one for striking below the net; one for falling out of bounds; one for hitting the net or posts; one for taking the shuttlecock by hand instead of by the battledore during the course of play. If a player touches his dress with battledore or shuttlecock he forfeits a score. When both sides stand in score at 13 points, the scoring side may choose to "set five," that is, to add five points to be played for, making the winning score 18 instead of 15. When sides are "14 all" they may be allowed to "set three."

The winners are the side scoring the fewer points.

BASEBALL

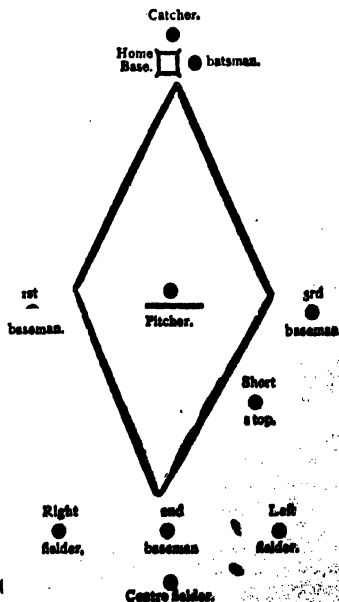
Established and played to a great extent in America, where it is recognized as the national sport, Baseball is a game which in principle is an extensive elaboration of the English game of rounders. It is played on a diamond-shaped ground, and the positions of players are best seen as indicated in the following diagram—

The distance from the home base, to the pitcher is about 60 feet. The implements used in the game are a hard white ball, a little less in weight than a cricket ball, and clubs of about 30 to 36 inches in length, which have the one end thickened and weighted in the form of an elongated knob.

The pitcher bowls the ball to a batsman of the opposing side standing at the home base. One man of the "in" side plays at a time, whilst all the "out" side are distributed over the field as shown in diagram. The pitcher has to bowl the ball so that it passes over the home plate—a white pad fixed into the surface of the ground—at any height between the batsman's knee and shoulder. The ball is given a swerve in the air and is sent at a terrific speed. Should the batsman fail to hit any one out of three consecutive balls he is out, and cannot bat again in that innings. But if he hits it, he runs to the 1st base, and stays

there. If the ball has been fielded from his hit and is used to touch him as he runs from one base to the other, he is "out." So each batsman plays through the game, the one passing from base to base until he gets home, when it is counted one point to his individual score, and the side that scores the higher number of points wins the game. When the pitcher has succeeded in getting three of the men out, the innings must be concluded. A batsman may take advantage of the pitcher who sometimes stands on his plate and makes merely a motion to bowl. Then the players may attempt to run from one base to another. The catcher is guarded over the face with a steel mask and wears a big padded glove known as the mith. All fielders wear miths of lesser size and all the players have their clothes padded thickly to enable them to slide along the ground on endeavouring to gain a base before they are touched out. The game is much faster than English cricket, and lends itself to more excitement.

The game of baseball differs materially from any English game in the



matter of management. It may be superintended and adjudicated upon by either one or two umpires. When two umpires are used the one stands somewhere near the home base, behind the catcher, and gives his judgment upon fair or foul balls and upon players running in to that base. A second umpire stands somewhere in the field where he may have control of all movements towards the other bases. When only one umpire is used, he stands near the home base, and decides on all points.

NET-BALL

In principle, the game of net-ball very closely resembles football in that the winning side is the one which scores the more goals, or, in the terminology of the game, "finds the more nets." The opposing players number eleven aside, and the field is divided into spaces over each of which one player aside has guard. The ball used is generally a large indiarubber one or a small football, one that bounces well, and is not too heavy. Between the goal posts, fixed at each end of the field (which is not as long as a football field), is a ring about two or three feet in diameter suspended a few feet from the ground. Behind each ring hangs a net, and the ball must be pitched into that net to score a goal.

At the beginning of the game the referee takes the ball and bounces it. On the rebound it is caught by a player into whose "space" the ball bounces. That player throws it to another of his own side, who in turn throws it to yet another. So, the ball is sent down the field towards the opposing goal. It is the object of the defenders to try and get the ball on a throw, either as it bounces or during its flight in the air. The defenders then become attackers, and they pass the ball one to the other until one of their opponents succeeds in capturing the ball. The rules as to the ball being in or out of play are much the same as in football.

A variation of this game is called "basket-ball," and is so termed when played amongst girls. It is practically

the same game as net-ball, but is played with any number aside.

PUSH-BALL

The game of push-ball is played with a large inflated, leather-cased ball, measuring from 4 to 6 feet in diameter. The players are eight aside, and the object of the game is to score goals by pushing the ball over the goal lines at each end of a field about 100 yards long. The game is played in four periods of 10 minutes each, and an interval of 3 minutes between each period. At the beginning of a game the captain of the team winning the toss decides whether his side will push off or defend. A team pushing off may line up against the ball, or they may take it 15 yards away from centre field and play for a flying start. The ball is considered to be in play when both sides touch it. The ball is advanced in a series of three pushes, and if they succeed in advancing 10 yards they are entitled to another three pushes. They may still retain possession of the ball until the defenders succeed in confining the total advances within 10 yards. Goals are scored by the ball being pushed over the goal line at any point. If pushed over between the posts, it counts 3 points; if anywhere else on the line, and within bounds, it counts 2 points. When a goal is scored, the ball is next pushed off by the side against whom the score was made. At the termination of a period, the referee marks the spot where the ball was last in play, and on resuming the game the push off is made by the team last having possession of the ball.

A player may use his strength upon the ball in any manner he chooses, and fouls are counted for unnecessary roughness. Fouls are penalized by 10 yards loss of territory.

The winning side is the one with the greater number of points—not goals—to its credit. For instance, a side scoring three post goals beats a side scoring four line goals, as that means 9 points to 8 points.

BATTLEDORE

Battledore is a game which enjoys the not quite unique distinction of

being able to be played by one person alone. The only necessities for the game are an open space, a battledore and a shuttlecock. In addition, of course, must be added agility and skill on the part of the player.

The object of the game is to keep the shuttlecock hopping upon the battledore, a score being recorded for every consecutive hop.

When two or more players join in the game, the shuttlecock is hit from one to the other, the player who misses to take and return falling out of play.

The player who is left in the game continues, when the others have dropped out, to bounce the shuttlecock as long as he can with the object of breaking his opponents' previous records in the matter of points scored in a former game. When two or more are playing, the striker hits the shuttlecock as high and as far as he can so that his opponent may have to run to catch it before it reaches the ground.

BOWLS

Bowls is an old English game played on a lawn, with large wooden balls known as bowls. The bowls are made so that one part is less rounded than the other. Into this flattened surface is embedded a small weight called the bias. In bowling, the biased side should be held inwards and the bowls are aimed to the right or left of the object they are intended to reach, the bias causing them to take an indirect course. On the rounded side of the bowls ivory spots are inlaid with a view to distinguishing one ball from another. The bowls are marked in pairs; that is, each pair has one, two, three or four spots on the rounded surface and the pairs are respectively allotted to the players in the order in which they come upon the drawing of lots. When the players number four, sides can be played, partners playing alternately. The first player is selected by lot and he takes a small ball—much smaller than, and of a different colour from the bowls—known as the jack, and bowls it as far as he chooses from the mark where the players stand. This mark is called the hob. When the jack has come to rest, the first player

bowls one ball after it, trying to get as near as possible to it. His opponent then bowls a ball from the hob towards the jack. If he can, he knocks the first player's ball away from the jack, or gets nearer to the object. The first player's partner then plays a ball and he is followed by the second player's partner. Then the first plays his remaining bowl and so on until all have had their turn. When all the players have bowled, they go to the other end of the green where the jack stands and count their points. All the bowls are measured from the jack. This rule applies even though the jack may have been struck and shifted from its first position by any of the players.

A game usually consists of twenty-one points up, and the points are counted by the nearest bowls to the jack. The side that has the nearest bowl counts one, two, three or four points, as the case may be, according to the accuracy of their aim. If two bowls of one side were nearer than any bowl on the other side, for instance, two points would be counted, and if their opponents supplied the next nearest ball, the counting would stop.

Points having been counted, the players then bowl back over the green as before, and so on during their pleasure.

Of the rules of the game the most important are: bowls must be delivered by an underhand throw; all players must start with one foot behind the hob. If a player fail to send his bowl more than six yards from the hob he is allowed a second throw.

The players need not necessarily take sides. Each may play for his own interest and count his points to himself.

COURSING

Coursing is one of the most popular of winter sports with farmers and country gentlemen, and is the term applied to the hunting of hares by greyhounds. In flat lying districts hares are always plentiful, and there are few more exhilarating spectacles than the coursing of a fast hare, for these animals and the dogs can cover a short distance at a speed of nearly fifty miles per hour. At an organized

meeting the hare is driven by beaters into the desired piece of land, and when some hundred yards from two greyhounds the dogs are let loose by a leash, which released their collars simultaneously. A course is decided by points. The dog that is faster up to the hare scores first, and if quicker in turning adds to the number of points. The kill is not an important part of the course, for often an experienced greyhound will outpoint the other dog and then allow his opponent to kill.

Rabbit coursing is another branch of the sport, but in this case the quarry is caught beforehand and released when required. In rabbit coursing, whippets, or greyhounds in miniature, are generally used, but meetings are held where any breed of dog can compete.

CRICKET

Cricket, for years now recognized as the national game, but now seriously challenged by association football, is a summer game, and is played by eleven a side. The object of each side is to score more runs than their opponents, and the eleven that makes the highest total wins. The game is played on an open space of grass of any size, and on a convenient place two sets of three wickets, pieces of wood twenty-seven inches in height, are set, twenty-two yards from each other. The object of the attacking side is to upset these wickets in a legitimate way while their opponents are batting. Two members of the defending side, as the batting side is often called, at the beginning of the game take their stand at either wicket, and while preventing their opponents upsetting their wickets or terminating their innings in other ways, their object is to make runs, i.e. run from one wicket to another, passing each other on the way. The principal members of the attack are called bowlers. With a ball not less than five and a half and not more than five and three-quarter ounces in weight, they endeavour to knock the wickets down or even knock a ball, two small pieces of wood placed horizontally on the wickets, off. The bowlers can

deliver the ball in any way, either overarm or underarm, providing the motion of their arm is continuous: the ball must not be jerked or thrown. The batsmen, as the defending pair are called, are armed with a bat not more than thirty-eight inches in length or four inches and a quarter wide. With this weapon they endeavour to not only prevent the wickets being disturbed, but to hit the ball to such a distance that either one or more runs may be scored. When one player is dismissed, his place is taken by another member of his side until ten of them have been given "out," when the innings terminates, and the opposing side takes their turn at the wickets.

A batsman is dismissed in many ways. When "bowled out" the wickets behind him have been upset by the ball sent straight from the bowler. When "caught out" the batsman has hit the ball into the air, and it has been caught by one of the opposing side before it has touched the ground. When given out "leg before wicket" the batsman's leg has prevented the ball hitting the wicket. When "run out" the batsman has failed to reach one of the wickets when attempting to make runs, before one or more of the opposing side have gathered the ball and knocked the wicket down. "Stumped out" is the term of dismissal when a batsman has not had his foot in the batting crease, when the member of the opposing side behind the wicket has stopped the ball and touched the wicket with it.

There are two creases at each wicket, the bowling crease and the popping crease. The bowling crease is in a line with the stumps, and the popping crease parallel with it; and both are eight feet eight inches in length, and are marked on the grass with a white substance. When in position to receive the ball the batsman usually has one foot on the bowler's side of the popping crease and the other between the two creases. When the batsman is running he has to ground his bat inside the popping crease before the ball is returned to the wicket he is running to, or else he is "run out." The bowling crease is to regulate the

place where the bowler delivers the ball from. He can bowl from any place behind the wicket, but at the moment of delivery must not have both feet in front of the crease. He bowls six successive balls from one end, a number that is called an "over." Then another bowler at the other end bowls an over, but no bowler is allowed to deliver two overs in succession. If the bowler fails to have one foot behind the bowling crease when he is delivering the ball, the umpire calls "no ball," and that delivery does not count in the over, but the batsman can score runs by means of a hit from that delivery, and cannot be given out unless he is "run out." When the bowler fails to deliver the ball within the confines of the creases the umpire calls "wide," and as in the case of a "no ball" one run is counted to the side that is batting. There are two umpires, and these take up positions near the wickets according to which end the ball is being bowled. The umpires are sole judges of fair or unfair play, of the fitness of the ground, the weather, and the light for play; all disputes are determined by them, and if they disagree the actual state of things continues. The fieldsmen or fielders, as the other members of the attacking side are called, other than the bowler and the wicket-keeper, do not have to take up any specified position in the field, but are placed according to the requirements of the bowler, who as often as not knows where the ball is most likely to be hit. When a run is made it is put down on a scoring book to the credit of that particular player and the side he represents. Sometimes he may hit the ball so far that he scores from it two or three or four runs, and hits are very often made and "run for 6."

The side that scores the most runs wins the game. To the score of runs "hit up" are added points gained through running "byes," "wides," and "no balls."

Again, if the ball be lost, six runs are allowed to the striker, though, if more than six have been run before the ball is declared lost, all runs should be counted to the credit of the player.

If the game be not played out, it is decided either on the first innings, or is drawn. In the case where one side has the advantage in runs over the other which has played its two innings, the playing side may not put in all their men, but declare the game theirs by so many runs and as many wickets as stand.

CROQUET

Croquet is a game played by two or more persons on an oblong-shaped lawn of short cut grass, with wooden balls of divers colours and long-handled mallets. A croquet lawn may be of any convenient size. No particular measurement is perfectly essential. The general size is about 100 feet long and 65 feet wide. At each end of the ground is fixed a peg, called respectively the "starting" and "turning" peg. Each player takes a mallet and strikes his ball with the aim of rolling it through a certain iron hoop or arch. Of these arches or hoops there are seven in all, placed at regular intervals diametrically and diagonally to the boundaries of the ground. A player's object is to send his ball from the starting peg through various hoops until it arrives at the turning peg, when the player changes his direction and makes for other hoops. Having conquered all the hoops he returns to the starting peg. The first player to return to the starting peg, having done all the hoops, is the winner of a game.

This would be all fairly simple to accomplish but for the fact that one player is allowed to hinder his opponent by "croqueting" it. To "croquet" an opponent's ball the player, when his turn comes, hits it lightly with his own and then places his against it. He may now strike his in order to reach a point of advantage to himself whilst he "dismisses" his opponent's ball far from the hoop for which he was playing. A player is said to be "wired" when a ball is so placed against a hoop that it cannot pass through. That means to the player really the loss of a stroke, since the ball must be hit away from the hoop before the player can pass through rightfully.

When a player passes through a hoop successfully he is allowed another turn; and so when he "croquets" or hits a peg. A player who fails to pass through the first hoop at the first attempt takes his ball up and awaits until his turn comes round after the others have played. A player may croquet any number of balls consecutively, but he may not croquet the same ball twice in succession, without first sending his own ball through the next hoop in order.

When a player has passed through all the hoops he is not compelled to peg at the starting point and so end his game. He may at will hit his ball anywhere on the ground, or croquet and so impede the progress of his opponents. He is then called a "rover." Roving is only of advantage to a player when he is one of a side and uses his turn to help a partner through hoops not yet passed by that partner's ball. A side wins a game when all its partners, or the majority of them, are home before a same number of the opposing side partners.

The balls are coloured, each in a different hue, and every player adheres to the colour allocated to him at the commencement of the game. To indicate more clearly the progress of the game, each player takes with him a "clip" of the same colour as his ball. This clip is attached to the hoop through which his ball has next to pass.

The game may be made to last as long as the players care to hold off from the home peg.

When a ball is malletted it must be done by a fair hit, and not "pushed." To push a ball is a foul and disqualifies the foul player's turn.

FIVES

Fives is a game full of vigour and dash and needing only a small india-rubber or tennis ball, that bounces well, as the indispensable implement.

The game is played against a clear wall, having no projections upon it, and being fronted by a level piece of ground. Two players are necessary at least, though as many as there is room for may join and make side-play purely for individual success.

The object of the game is to keep the ball bounding and rebounding between ground and wall. This is done by the players hitting at the ball with the open palm of the hand.

Upon the wall a rectangle, of dimensions chosen by the players, is drawn, having for its base the ground line of the wall. A considerable space is marked out, also upon the ground. Balls that fall without these lines are not counted in the game.

At the commencement of the game the players stand in a line facing the wall. They are arranged, if in sides, with partners alternately. One player throws the ball against the wall. When the ball rebounds and either before or after it is allowed to touch the ground, a player of the opposite side strikes it with the palm of his hand against the wall again. Then the first side repeats the operation and so on until some one misses it, when a point is called to the other side than that of the faulting player.

As the players get brisker and more vigorous in their movements the ball is hit against the wall at all angles, rebounding in the same manner, and the game becomes a spirited and exciting exercise.

FOOTBALL

Football, as a game, has become the national winter sport of Great Britain. It is a game, played according to different codes, in which a large inflated leather-cased ball is struggled for, sometimes kicked, sometimes carried, by opposing sides, numbering either eleven or fifteen, according to the code, into the goals of one another's keeping. The game is played on an open field, marked out by white lines, and having fixed at each end a pair of upright posts surmounted by a cross bar. The codes under which the game is played make almost two quite separate and distinct games in themselves, and shall be consequently dealt with.

The Association Code.—The game is contested by two sides, each composed of eleven players who take up positions on the field in the following order: goalkeeper, backs (two), half backs (three), forwards (five). The

field is divided across the centre by a line, in the middle of which a round ball, between 27 and 28 inches in circumference, is placed. The forwards face each other on either side of the half line, the other players standing in lines of order between them and the goal. At a given sign, the centre-forward of the side which has not won the right to choice of ends kicks the ball to one of his partners in the forward line. The play is then begun, the ball being passed by one to the other of the players of the same side until it is captured by the other side, who pass it again amongst themselves.

At the back of the goal structure is affixed a net, into which it is the object of the opposing players to kick the ball; but when it is once over a line drawn directly under the bar a goal is scored. The ball may not be touched by the hands or arms of the players, and is propelled entirely by the feet or head, except in the case of the goalkeeper, who is permitted to handle the ball and throw it or punch it out into the field or off the field in defence of his goal.

The field of play, which is from 100 to 130 yards in length by 50 to 100 yards broad, is bounded by lines on which the goal posts are fixed, and which are called the goal lines; and on the sides of the ground from one extremity to the other "touch lines" are drawn. If kicked behind the goal line by an attacking player, the ball is declared out of play and is brought back into the goal area of the side behind whose goal it was sent. It is then kicked off again into the field and the play resumed. But if the ball is kicked behind the goal line by a defender of that goal—whether intentionally or through accident—the ball is taken to the corner of the field by an attacker and kicked into play as near to the goal as possible. When the ball goes over the touch line, it is thrown in by one of the side opposing that which kicked it out of play.

When a goal is scored, the ball is brought back to the half line and kicked off as at the beginning of the game by the side against whom the goal was scored. At the end of a period of 45 minutes half time is

called, and after an interval the sides return to the field and "change ends," playing for the concluding 45 minutes towards the goals they were defending in the first half. The side which scores the higher number of goals is adjudged the winner. In the event of both sides scoring an equal number of goals or none at all the game is declared drawn; and if no goals are registered at all, a similar decision is arrived at.

The game is in charge of a referee, who follows the ball over the field of play, and he is assisted by two linesmen, who keep at respective sides of the field along the touch lines.

The goals are upright posts eight yards apart, with a bar across the top eight feet from the ground. Association football is a very easy game for the uninitiated to follow. "Free kicks" are given to one side when a player on the other has handled the ball, fouled an opponent by an unfair charge, or been adjudged "offside." When a defender handles or fouls inside the penalty area, a space eighteen yards each side and in the front of each goal, a "penalty kick" is awarded the attacking side. Then the ball is placed on a spot twelve yards from the goal, and one of the attacking side attempts to kick it past the defending goalkeeper, who stops in goal.

The Rugby Code.—The first essential in which the game, as played in the Rugby Code, differs from that played in the Association Code, is that the ball is of oval or egg shape. Then the number of players is 15 aside arranged from the goals to the half line in the following order: full-back, three-quarter backs (four), half backs (two), forwards (eight). The arrangement of these positions is yet again varied in certain methods of playing under this code, which shall be dealt with later. For the present let the game of rugby, as regularly played, be considered.

The "kick off" is made by one of the forwards kicking the ball as hard as he can up into his opponents' part of the field. Every player is allowed to handle the ball, to pick up or carry, but not to hit it.

Goals are scored by the ball being

kicked over the cross-bar, which is ten feet from the ground. In addition to this method of scoring an advantage, the ball may be "touched down" by a player anywhere inside his adversary's goal line. This score is called a try.

The object of the game is to score the greater number of points. A try counts three points. When a try is secured the ball is brought out into the field by the scorers and *placed on a line 25 yards from the goal line*, at a spot directly opposite the point at which the try was touched down. The ball is then kicked by one of the scoring side with the intention of driving it over the cross-bar. If successful the three points are increased to five, the try having been converted into a goal. After the scoring of a try or goal, the play is resumed as from the start by a kick off, from the side against whom the score was counted. The players pick up the ball at every opportunity and run with it towards the opposite goal. The defenders of that goal try to catch the man with the ball—an operation which is called tackling. If a man with the ball sees he is about to be tackled and cannot get through the defence alone, he "passes the ball" by throwing it to a partner in a more favoured position. But the ball must not be thrown forward. This player, in his turn, runs with the ball to another position on the field or passes it to yet another partner. As an alternative to "passing" a player may kick the ball and his partners follow up and again attempt to secure the ball. A scrummage is formed by the forwards of both sides facing each other and bending down in a group. The ball is thrown along the ground into the middle of a scrummage by a half back. It is then heeled out into the field by the players, each side doing its utmost to get the ball to his own "backs," who quickly pick it up and pass to each other as they run towards the opposite goal.

Scrummages are given for hand-ball (hitting or punching the ball), for "forward" passing, and for "held ball" (that is, when a player is tackled before he has time to "pass" and the ball is thus held by both tackler and

tackled). Also, a scrummage is made just outside the touch line when a player makes a "foul throw." A foul throw is when a player does not throw the ball into the field in a straight line after it has been kicked out of play into touch, i.e. over the touch line. "Free kicks" are awarded to the side against whom fouls are declared by the referee. A foul may consist of tackling a man who is out of possession of the ball; or picking the ball up out of the scrummage. A free kick is also awarded for "off side." A player puts himself off side for picking up the ball as he runs towards or faces his own goal line. If a player catches the ball as it falls from a kick, a knock-on or a throw-forward by the opposite side, and if he simultaneously digs his heel into the ground marking the spot where he stood, he is declared to make a "fair catch" or a mark, and is awarded a "free kick."

From a free kick or during the course of running play, a player may score a goal by kicking the ball over the posts. This is frequently done by what is called a "drop kick," which is made by letting the ball fall from the hands and kicking it as it rebounds. A punt is made by letting the ball fall and kicking it before it touches the ground.

From a drop kick a goal may be scored for which four points are counted.

As in Association, the players change ends at half time, and the winners are those who make the most points, whilst a draw is declared if nothing is scored or if points are equalized by both sides.

Unique Methods.—It was formerly the custom for the two half-backs to play up close to the scrummage, but Welsh teams have recently made a modification in the disposal of their halves. The one half back called the "inside half," or "scrum-worker," plays close up to the base of the scrummage, whilst his partner stands at some distance away from the scrum. He is known as the "outside" or "stand off half."

By this arrangement the ball, when heeled out of the scrum, is transferred from the inside to the outside half. It is maintained that the game is

rendered more open in its action by this method of attack, although it may weaken defence in combating attack from the opposing halves.

England, Scotland and Ireland cling to the old method of play, but the tendency is growing towards giving a trial to the Welsh method, which amongst its originators invariably proves a success.

Another alteration in the disposition of players has been made by the New Zealand players, who use seven forwards and eight backs. In the scrummage each player has his allotted place. This makes for definiteness in the work done in the scrummage. Two players act close to the base of the scrum. One is a half-back and the other is called a wing forward, but his duties do not vary from those of an "inside half." Thus, five men are left between the full back and the halves, and these are placed in positions on the field representing three-quarter backs and five-eighths backs.

The Northern Union Code.—Adopted more especially for the use of professional Rugby football players, the Northern Union code was made in the form of the old Rugby code, but with some modifications upon the old rules.

The first difference is that the players number 13 instead of 15. The size and arrangement of the field is much the same as in the ordinary Rugby game.

There are certain alterations with regard to the "Touch" play which demand particular notice. "When the ball or player carrying the ball touch or cross the touch line, the touch judge must stand with flag uplifted at the point where the ball or player entered touch *until a scrummage has been formed.*" That is, the ball is not "thrown out" as in the usual game, but is put into scrum near the place where "touch" has been entered. Again, when the ball drops directly into touch from a kick it is carried back again to the place whence it was kicked and a scrummage formed there. Thus it is that the back player under the Northern Union code who succeeds best in his kicking is the one who can manage to send the ball well down the

field so that it drops just in the field of play and bounces into touch.

The linesmen, too, under this code, have to lend a deal of assistance to the referee in deciding fouls and faulty play. In the matter of scoring there is this material difference: although a try counts, as before, 3 points, a goal of whatever kind—from drop kick, punt, place or converted—counts only 2 points. In the case of a converted goal the points for that goal count in addition to the 3 points for the try. There is also a marked difference in the play of the half-backs, who remain on either side of the scrum until the ball is heeled out. This lessens the chances of the defending halves obstructing the movement and the game is made more open.

It is still a doubtful question, though, whether this code is an improvement upon the old style, although it certainly lends itself to a faster game.

GOLF

Golf so far as the rules are concerned is simplicity itself: it merely consists of getting a small ball into a series of holes by hitting it with clubs. The game is played over a course usually made up of eighteen holes, and the distance from the "tee," or the place where the players commence again after getting the balls into one hole, varies to a great extent. In some the distance from the "tee" to the hole is but 100 yards, and all distances from that or even less up to 500 or 600 yards. Most of the "holes," as the distance is styled, are between 300 and 400 yards in length, but the object is variety. On any sort of land a course can be laid, but soil that is sandy is the best. The clubs used by players are numerous. Those used by the average player are three wooden clubs styled "driver," "brassie," and "baffie," and five iron clubs, "cleek," "niblick," "mid-iron," "mashie," and "putter." The wooden clubs are used for driving the ball as far as the player is able to do, and the iron clubs, which are very different in shape, come into use according to the "lie" of the ball. At the second, third, or fourth stroke from the tee the greens are reached. The green is a flat piece of grass some ten

or fifteen yards wide, and in the middle of it the hole in which the ball is to be placed is set. The hole is four and a half inches in diameter, and is lined with tin. The player who gets his ball from the tee to the hole in the fewer number of strokes wins that hole, and the one who wins most holes wins the match, except in the case when a big tournament is decided. Then the players compete in pairs, and the one of all the competitors who puts his ball in all the holes in the fewest number of strokes is the winner. The ball itself is made of india-rubber, with a composite exterior. To make the game more difficult "bunkers" are placed all over the course in the line of play. These are usually banks of earth built up to a height of several feet, but often a "bunker" is naturally supplied by trees, bushes or ditches. These, of course, handicap the player to some extent if the ball is driven into one of these; but a proficient player will cover an eighteen course in such a few number of strokes as 70 to 75. At first golf is a difficult game to play, but considerable progress is made by the average player once he gets used to the clubs, which are anything but natural weapons to use.

Golf has many distinct advantages over most games. It can be played all the year round, and as a steady exercise it is not surpassed by any other outdoor sport. Another advantage is that one, two, three or four players can play at the same time. When four players go round the course together, they usually play in pairs. That is, two players are on one side and two on the other, and each side uses only one ball. Such a match is called a "foursome." Players are usually accompanied by attendants to carry their clubs; these are styled "caddies."

HOCKEY

Hockey bears a very striking resemblance to football, played under the Association rules, inasmuch as the positions of the players on the field and the names describing those positions are identical with those of the latter game; hockey, however, is played

with a ball of the same size as that used in cricket, and the players propel the ball through the medium of a club or stick. The area in which the game is played is much smaller than that of a football field, and the goals are also smaller in size, but the main principles are the same, that is, the object of the game and the manner of scoring.

The hockey stick is very similar in shape to the golf club, though the butt is much larger; in striking the ball a player must not raise the stick above the shoulder, nor is he allowed to take any part in the game unless the stick be in his hand; the hockey stick must be of such size that it will pass through a ring two inches in diameter and it must be composed entirely of wood. Unlike football under either code, hockey allows no charging or collaring of one player by another. The game is usually played for a duration of seventy minutes, though this period may be increased or diminished by arrangement between the captains before the commencement of the game.

LACROSSE

The English game of lacrosse was imported from Canada, where the settlers had adapted the game to suit themselves from the North Americans.

The present game of lacrosse is played on the following lines: In the first place the size of the field of play is not limited by any rule, but is agreed upon by the captains of the opposing teams before the match is commenced; in the case of the ball passing beyond the limits thus arranged the referee calls "stand," and the ball is then "faced" by two players who are nearest to it and not less than four yards within the boundary at the point where the ball went out of play. To a certain extent the game may be compared to hockey in that the ball is propelled with a stick, though, in this case, the stick is called a "crosse," and may be raised to any point above the head. The crosse consists of a long piece of wood bent at one end in such a manner that the two parts form as it were two sides of a triangle, the base of which is considerably shorter than the other side; from the end of

this base to the top of the stick is stretched a cord, forming the third side of the triangle, which is filled up with a net. The rules of the game require that this net shall be quite taut when the ball is not placed on it, but it must also be sufficiently pliable to allow the weight of the ball to form it into a pocket.

The lacrosse ball is made of rubber sponge and must not exceed $8\frac{1}{2}$ inches in circumference, nor must it weigh more than $4\frac{1}{2}$ ounces.

The goals are placed facing each other at a distance apart not exceeding 150 yards; the area of the goal mouth must not be more than 6 square feet.

Each side consists of twelve players, and their positions are named thus: goalkeeper, point, cover-point, third man, right defence, left defence, centre, left attack, right attack, third home, second home, first home. Players are not restricted to using the crosse only, they may use their legs or feet to propel the ball. Goals are scored in the same manner as in football and hockey; when half the time fixed for the duration of play has elapsed "half time" is called, and the teams change ends of the field.

The ball is propelled by slinging it from the net of the crosse, and a proficient player shows great skill in slinging and catching the ball when he is running at full speed.

The game, which is very fast, is rapidly gaining in popularity, and clubs are being formed all over the country.

QUOITS

Imagine an iron saucer of shallow depth, the edges tapering towards the rim from an excessive thickness. Let the centre part be cut out, leaving a ring about an inch and a half in width and from six to nine inches in diameter, and you have a quoit. Quoits are made in sets of six, eight or a dozen in number, of equal size and weight.

Although a space of ground measuring about twenty yards in length is required for the game of quoits, the amount actually used by the implements is no more than a square yard at each end of the ground. Into each of these square plots of damp, ungrassed turf, or clay, an iron spike is driven

These spikes are called hobs. The object of the game is primarily to pitch the quoits from one hob to the other, and the scores are counted according to the nearness of the pitched quoit to the aimed-at hob. The players may form sides, or strive each for himself. In any case the quoits are first distributed equally among the antagonists in the game. The quoits are all thrown first from one hob, and when each player has had his throw they all go to the other end of the ground and count up scores. They then pitch for the other hob, which was the starting point of the first bout. The scores are counted in this manner: if one player has a quoit nearest to the hob he takes one point. Should another player have a quoit second nearest it counts no point, and merely serves to cut out all other quoits more remote from the hob. But if a player has more than one quoit nearest the hob he adds to his score a point for each quoit adjacent to the spike and not cut off by an opponent. Thus if only two men are playing with a set of twelve quoits, and the first player has his six quoits nearer to the hob than his adversary's one, he takes six points; but if he has one quoit nearest and the second nearest is his opponent's, he only counts one point, though his five remaining quoits are nearer to the hob than any other one of his opponent's. The quoit when thrown is not clutched tightly, but rather balanced on the palm and fingers with its concave side downwards and is held in position by the point of the thumb which rests over the convex surface of the rim. As it leaves the hand it is given a twist which facilitates its speed and sends it swerving through the air with a whistle, a ring, and a thud.

RACQUETS

The game of racquets is played in a court by two players, when it is called a "single," or by four players, when it is called a "four." The court has four walls, the front and back walls being higher. On the front wall two lines are drawn. Every "service" must be over the higher line or it is a "fault." After the service the ball is "in play," and every stroke must

be above the lower line, the higher one then having no significance at all. The server stands in a marked square. The "server's box" is a square in front of a line drawn across the floor of the court, about two-thirds distance between the front and back walls. From the middle of this line another line is drawn to the back wall. The server must serve from the right-hand "box" to the left-hand square, and vice versa. Should the ball not pitch in the right court or beneath the higher line it is a "fault." Two services are allowed, and should both these be "faults," "hand-out" is called, and in a single the server's opponent serves.

Unless serving, no point or ace can be scored. An ace is scored by the opponent of the server failing to return the ball above the lower line before it has bounced twice; or by the said opponent hitting the ball out of court; or by the server allowing the ball to hit himself. The game is 15 points up, and the series of games are the best of seven or five. A small hard ball is used, and the racket has a small round head and is longer and lighter than a lawn tennis racket.

SHOOTING

Shooting with fire-arms as a sport is practised with rifle and revolver. Game shooting is conducted with a double-barrelled gun, grape shot generally being used. Game shooting becomes a kind of mild hunt, for the game is not always to be got at for the wishing. The method of shooting different kinds of game varies considerably, for birds which fly high have to be treated in a widely different manner from birds whose habit it is to fly in circles or in some erratic course through the air. The sportsman in his training learns the habits of the birds and knows at a glance whether the bird he sees is of the kind he is after.

A sportsman always gives the bird a chance, that is, he allows it to get away on the wing before attempting to shoot at it. Naturally he does not allow the bird to go "beyond bounds," but he never fires at a stationary bird or one that is particularly close to him.

Target shooting with rifle and

revolver makes good sport, and is excellent practice for the eyesight, giving the shooter a steady and keen eye which serves him well in other sports. As a practice for the steadying of the muscles generally and in the arm particularly no game is equal to that of revolver shooting.

The fault amongst the beginner in using the revolver is that he tugs at the trigger almost from the wrist upwards, whereas the trigger should be pulled merely by the slightest pressure from the terminal joint of the forefinger.

TENNIS

Tennis, the parent game of lawn tennis, although similar in many respects to the latter in principle, differs materially in practice. It must necessarily be played indoors upon a concrete court about 90 ft. in length by about 30 ft. in breadth. The racquets are of light wood strung with gut. The balls are made of some woollen stuff and are covered with white cloth. The dedans and corridor are covered by a sloping wooden roof 7 ft. 2 ins. from the floor. This is called the penthouse, on to which the ball is played from the service side in commencing play. A long passage at the entrance to a tennis court is divided into several apartments called galleries. From the dedans to the last gallery are the figures 1, 2, 3, 4, 5, 6, each at a yard distant from one another and making what are known as the chases.

By a chase is meant that when a ball falls on or between any of these lines, or enters a gallery (except the winning gallery), the marker calls out "chase five" if it falls five yards from the end wall, "second gallery" if it falls in or opposite the second gallery.

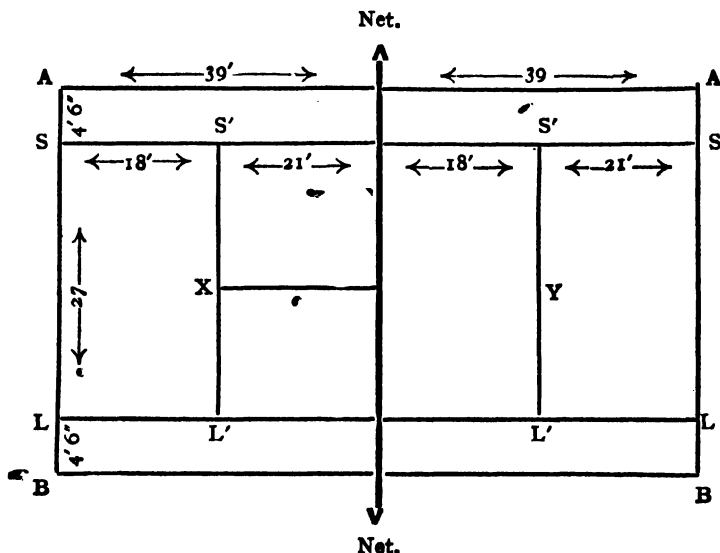
When a player fails in service to strike the ball over a certain point, it is reckoned a fault. If the ball passes round the penthouse, on the opposite side of the court, and falls beyond a described line, it is called a "passe," goes for nothing, and the player has to serve again. The scoring as to points is the same as in lawn tennis (*q.v.*) but a set is represented by eleven games.

LAWN TENNIS

Lawn tennis is a game played in the

open and most generally upon a well-rolled plot of short-cropped grass. The playing grounds for lawn tennis are called, as in the parent game, courts. Sometimes these courts are made of concrete or asphalt, but the most serviceable and most pleasant to play on are the grass courts.

A court, which measures 76 ft. by 36 ft., is divided in the centre by a net 3 ft. high, which is stretched across the width of the court, and over which the players hit the balls with tightly-strung racquets. The court is marked as in the appended diagram :—



The lines in the diagram are known as follows : A B = base lines ; X Y = half court line ; B B and A A = side lines ; S L and S' L' = service lines.

The game is played by the opposing players standing in the courts on each side of the net and hitting the ball across. A ball may touch the net and be counted as a fair hit provided it falls in the opposite court from which it was driven. This is so except in service ; that is, at the start of play either at the beginning of the game or on resumption after a score. Should the ball touch the net and fall upon the other side in service, the server is permitted an extra serve. But if he fail to send the ball over the net, or sends it into the wrong court, it counts a fault. The game may be played by two, three or four contestants. When only two play the game is called

"Singles." When more than two it is called "Doubles."

A service is made from the right side of a court into the diagonally opposite court, the server standing with one foot beyond the service line and the other foot either on or within it. The service may not be volleyed in return, but the ball must be first allowed to bounce, when it is quickly returned on the rise. When once the service has been given the ball provided it is kept across the net, is played anywhere in the court.

The scoring is somewhat peculiar. For the first two scores "15" is called, thus making 30 ; but the next is "40," and after that the "game" is called. But should both sides be on "40" at the same time "deuce" is called and the sides play for "advantage." When one side consecutively gains two advantages, game is called ; but if one side

gains an advantage and then its opponent does so the score is again at deuce, and so on.

Six games make a set unless long sets are played. Then if each player has won five games, two more have to be won in succession.

ICE GAMES

Ice games are amongst the most popular with the all-round athlete, though some of the games played upon the ice do not essentially demand much muscular energy or progress. Of such is the game of **Curling**.

This is played with large round stones to which are affixed hands on the tops. These curling stones are "pushed" along the surface of the ice towards a tee about 40 yards away from the footboard or starting point. In the matter of scoring the game resembles in a slight degree the game of bowls.

Skating, as a sport, can hardly be equalled for its vigorous merriment. Once the skater has acquired the art of keeping himself upright on his skates he will never lose that art, though he may lose his balance in attempts to improve his art.

Skating is simply a method of running upon ice. Skates are steel blades fixed perpendicularly to wooden or steel soles which are fixed under the foot of the skater. The blades run parallel with the line of the foot and are grooved along the running edge. The first art in skating is that of balance. The skater, in fact, however competent he is, cannot afford to allow his head and shoulders to wander backwards over a perpendicular line to the heels. Unless very careful in his balance, even the best skater may find his feet leaving him and slithering off in front of him before he has time to bring himself to rights. The skater must bend forward if he bend at all.

Once he has learned the art of balance the skater strikes out by urging one foot forward and slightly outwards. With the toe of the standing skate he grips rather than digs into the ice. When the one foot has been urged forward the other follows and makes a walking motion, except that there is more spring put into the movement.

A good skater can cover a mile in 3 or 4 minutes, which must be admitted is a fair pace to be travelling on your feet through a sharp, frosty air.

Ski-ing is not such a fast sport as skating, and indeed is less of a sport than a method of covering distances upon snow-clad or ice-bound land. The ski is a piece of wood some 6 feet in length, slightly turned up at the end, which is fixed to the ordinary boot. The wearer glides over ice and snow at a good speed and in an easy manner by using skis. The wearer does not attempt to lift his feet, but simply pushes his feet forward in order to effect a progress. On skis extraordinary things can be accomplished.

Sleighing.—Sleighs are carriages built on one or two pairs of wooden or steel runners attached to a framework of wood or iron on which is supported the body of the vehicle. The runners curl up at the front extremity to facilitate the vehicle's progress through loose snow. It is better that a sleigh should be built with the runners outside the body of the car, making it less easy to be upset. The sleigh is dragged either by horses, dogs or men. For field play in winter the sleigh as a means of progress makes great fun and healthy sport.

TOBOGGANING

Were the English winters more severe tobogganing would be extremely popular in this country, as to indulge in the sport as one would wish a lot of snow is necessary. Then a "run" is built, starting at the top of a hill and finishing in the valley below. These "runs" at the winter resorts in Switzerland are two or three miles in length, and the many curves encountered en route make the sport an exceedingly dangerous one. Every winter there are a few fatalities, and any number of minor accidents. The toboggan itself is made of strong wood with the best steel runners, and the occupant, lying flat, face downwards, guides himself with his hands and feet.

"Bobsleighing" is another branch of the sport. A bobsleigh holds four, five or six people, who sit behind each other with feet outstretched, and the guiding is mainly done by the front

person by "reins" fixed to the head of the bobsleigh. A speed of nearly sixty miles an hour is approached on a fast run by both a toboggan or a bobsleigh.

In England a little of this sport is obtained in some winters, but there are no organized "runs," enthusiasts having to travel down the best hill they can find.

ROLLER SKATING

The proper method of skating upon rollers is different from that of skating upon ice-skates. First of all, the amateur has to acquire the proper balance of the body, and next, the proper swing of the legs. Remember that instead of standing on a steel edge, as on ice-skates, you are upon four rollers, with a tendency always to go forward on the slightest motion of the body. The real secret is to acquire thorough command over this movement, and to progress in any direction you choose.

For the first essay the novice will do well to obtain the assistance of a friend. Soon, however, he will get sufficient confidence to run alone, and once able to stand upright and firmly on the rollers, all the rest will come with practice.

The knees must be kept well forward and over the toes, as upon their position depends that of the body generally. The impetus should come from the knees, and they need not be raised at all. The arms and hands act as guides and balances. Generally, however, they should be kept to the sides or folded. The head must be well set up, and inclined rather to the front than to the back. Be careful not to widen the stride too much, but let one foot follow close upon the other, straightforward first, as curves show your progress in the art. Do not exert yourself too much in your early trials. Never look at your feet, but keep your eyes open and be ready for any emergency.

Inside and outside edge do not really exist—certainly not to any extent—upon rollers as they do upon ice-skates, but the swing to the right or the left will have a similar effect, even though you stand square upon the rollers. By this swing you obtain the impetus,

and whether forward or backward, attention must be paid to the balance.

PEDESTRIANISM

The oldest form of locomotion known to man is still the most popular, since it is the most easily acquired; and that is the natural use of "shanks's pony." But naturally as walking comes to a man, and simple as it seems, so many people—although they manage to get about and travel on foot from one place to another—fail to walk properly, that the sportsman, of all people, should set the pace and the fashion, the carriage and the measure, in the noblest and most useful of all the arts. For walking is undoubtedly an art. On "how not to walk" you have only to seek advice by observing at least 50 per cent. of the people you meet in the street. "How to walk" you may learn by choosing a country road, and setting out along it towards some goal which you are determined to reach, and to do so by using the gift and power that have been given you by Nature, to use them earnestly and as they deserve. To treat these gifts fairly, the walker should first see that his body and head are erect, shoulders back, and feet diverging from the heels at an angle of 40° or 45°.

Some men walk from the knees down; others use only the thighs and hips and let the feet amble along in a shuffle as best they can. Some walkers forget that their legs are part of themselves, with the result that their bodies are swung forwards and sideways, the legs being pulled after them and slung about like the limbs of a mannikin. The good walker puts the left foot forward, letting it touch the ground heel first. As the heel touches the ground the heel of the other foot is lifted, and by the time the toes of the left foot have reached the ground, the right foot is carried to a distance as much in front as it was behind. This action is pursued at a regular, consistent speed, and the movement of walking is made as graceful as it is easy.

For the "long tramp" in the country the walker needs to be provided with a knapsack in which to carry food, a stout ash stick, preferably with a straight crook, and he should have certain

that his boots are thickly and solidly soled. A twenty-five mile walk in a day should not tire him in the least if he walk properly. He should not take too long a stride, and should use all his leg muscles, allowing the body and arms to sway with the controlling movement of the nether limbs.

To the joys of walking are added all the charms of forest play and mountaineering. As a sport this latter may be made into a very elaborate pastime. When a particularly steep climb is to be negotiated the members of a party of climbers tie themselves together by lengths of strong but easily pliable rope. A climb up a very steep ascent is managed in phases, one of the party doing one portion whilst the others remain at a standstill. The process is repeated by each climber and so the ascent is made by slow and steady stages.

Running is not, as many would believe, merely walking fast. It is a different action altogether. Different muscles are brought into play. It is more a series of light leaps and springs. The knees should be lifted high on each spring, the heels thrown up well behind, and in patting the foot back to the ground, the leg should be stretched out straight to its full length.

The runner should hold his arms with the elbows, not tight, but resting against the ribs, the arms from elbow to hand being horizontal, fists clenched and turned inwards towards the chest. He should breathe in deep breaths, inhaling through the nostrils, expelling through the mouth, on alternate step-pings of the left foot.

For a short, sharp sprint the action is quickened and the pace put to the utmost. The runner should take a few long and deep breaths before starting and then one full breath, which he retains until the end of the sprint. For the long "harriers'" run he should break off at the beginning with a sprint, slacken down to a "trot," and when nearing the end of the run make for home with another sprint. After the first sprint he will get "puffed," but on the trot he gains what is known as "second breath," and he is not likely to feel puffed again all through the run, but is rather all the fresher.

The same laws apply to the paper chase. The longer he can keep up the sprint at the beginning the better for his side in the game.

In the paper chase a couple of runners—the fastest of a pack—are furnished with bags filled with tiny pieces of paper or prepared confetti. These two runners are called the hares. They start off in a given direction which they are supposed to keep for a mile or so. When they reach the end of the given distance they choose their course, but in so doing they scatter handfuls of confetti in their wake. About a quarter of an hour after their start—either more or less time as the players elect—another batch of runners known as the hounds and consisting of the remainder of the pack, set off in the direction the hares took. They are then guided by the scattered confetti, and do their utmost to catch up the hares before they get "home."

PLAYGROUND GAMES "

In the playground are practised innumerable games that defy description, have never been given a written code of rules, but yet remain as popular and as brisk as ever they were.

Playground games are called differently in different localities as a rule. A game which in one county is called Cockorney is in another district called by some equally mysterious but totally different sounding title.

The one game that seems to be known in all parts by the same name is the game of **rounders**, which is played with bat and ball by sides which are chosen and captained in right royal fashion. The one side is "in" and the other "out." The "in" side stand at one side of a circle marked on the ground by stones or sticks dug into the turf. One of the "out" side stands somewhere within the circle and pitches the ball to one of the "in" side, who hits the ball as hard as he can and runs to the nearest "post" or further if he can before the ball is caught and thrown back to the ring. The next player hits and runs, and the first player runs on at the same time to another post until he gets home again. Should any

player be hit by the ball as he is running from one post to another he is "out," and has to retire behind the hitting tee, and similarly if he is caught out on a bounce. When nearly all the players are out one by one an extra strong batsman will cry "rounders," and hit so far that he does the whole circle of posts in one uninterrupted run. If he accomplish this, his companion players are reinstalled in the game until the ball is caught before it touches the ground, when all are out and the "out" side take the bat.

Ball in Hats.—For this game the players, who may number anything from two or three upwards, place all their caps, saucer fashion, in a row at the foot of a wall. Positions are given the players according to some kind of ballot, and the owners of caps play in the order in which their caps are placed. All players stand in a line about ten feet from the caps. Number one, with his eyes closed that he may not favour any one, bowls the ball at the row of caps. Maybe the ball will not find a home and rolls back again. But should it rest in one of the caps, then immediately all players, except the one into whose cap the ball has rolled, make a dash away to any part of the ground. The one in whose cap the ball is, rushes to it and seizes the ball. He shouts, and all players must stand where they are. He then throws the ball at a player who stands close by. As soon as the ball is out of his hand the players again run away and seek hiding if possible. The player at whom the ball is aimed, if it hits him, catches it and shouts again, when the same sort of play is followed as before. So the ball is thrown about until some one misses. Then they all return to the mark and a pebble is put into the hat of him who missed. When all have bowled, the owner of the cap with least or no pebbles in it is the winner of the game.

"Buttons" is played against a wall, between two players. One throws a button against the wall and the second player follows in the same fashion with intent to make his button either fall on or come within a span

of the other button. Should this happen he gets a button. If not, he gives a button to his opponent.

"Snip or Span" is a similar game to buttons played with marbles. The first of two players shoots a marble down and the other shoots at it. If he hits it or comes within a span of it he takes a marble from his opponent. If he fail either to hit or come within a span he gives a marble, and the first player shoots at the second one's marble as they are then placed. The game goes on in this manner all round the ground.

"I Spy," or **"Hide and Seek,"** is a game in which one player is put to count up to a hundred whilst all the others go and hide. The counter then goes to seek them one by one. As soon as he sees one of the "hiders" he calls out his name and runs to the home, where he taps the wall three times and again calls the discovered one's name. If, when the spier or counter is far out from home, a player sees an opportunity he runs to the home first and so gets another chance of hiding.

"Follow the Leader" is a game easily played, and lending itself to great skill and energy. A smart boy is picked, and he sets the pace to his followers. He runs ahead and the others follow, and do everything he does. If the leader hops, all the others hop. If he swings his arms, they do so too in the same manner. Sometimes he leads them over ditches, jumps a brook or crawls through a tunnel. In every case his followers must do exactly as he does. If any one fail he has to undergo some sort of light penalty chosen by the leader.

Chevy Chase is a game that is easy to play, as it requires no toys, and can be played by any number. The two fastest runners from a company pick sides from amongst the remainder, and having marked out two bases side by side, the teams take up their stands in them. Opposite each base, at a distance of about 20 yards, a smaller base is marked out, this being called the prison. The prisons are diagonally opposite the bases to which they belong. Thus base number 1 faces prison number 2, and vice versa. A

space in the centre of the ground is called the chevy, and the game begins by any one of either side running out from his base into chevy and crying out "Chevy Chase, one, two, three." This constitutes a challenge, and one of the other side runs out after him to touch him if possible before he gets back to base. If this manoeuvre is a success, the player so touched is put into the prison belonging to his own base. There he must remain until one of his side races out to him and touches him, which means that he is released, and may run back to base. If a player from base number 2 chases one of base number 1 he may at once be pursued by another from base number 1. As soon as any one is touched he must go to his prison to await his release. It may be that several prisoners are in prison, in which case they may, by holding hands, stretch out into the ground with the last one only having one foot in prison. This enables the player who comes to release one of them having a shorter run, and freedom is brought sooner. Only one player at a time may be released by the same base man. No one may attempt to rescue a second prisoner without first returning to his base. The side which manages to send all its adversaries to prison so that none remain is the winner.

Touch.—Of all games most easily learned and most easily played, "Touch" or "Tag" is undoubtedly the simplest, and at the same time may be the fastest. Any number may join in the game. A pursuer is chosen whose duty it is to chase the others and touch one of them. As soon as a player is touched he becomes the pursuer, and in his turn runs after the rest. The pursuer is sometimes called the "*he*." The game is made more exciting when players run as close as they can to the "*he*" without being touched. Apart from these principles of the game the only rule to be observed, and that is decided upon at the beginning, is that when a player touches wood, he is free from being touched by the "*he*." This gives him an opportunity of getting back his breath after a fast run.

Cross Touch is a variation of the

ordinary game of touch. Instead of chasing the whole pack indiscriminately the "*he*" declares his intention of pursuing one particular player, by whom he is touched on the shoulder. This challenger cries "Go!" and races away into the field followed by the "*he*." The "*he*" must follow this one indicated player until another crosses between them. The pursuer now turns his attentions to the player who crossed, and chases him until another crosses, whom in turn he again pursues. The "*he*" is thus harassed, and the game becomes faster and more exciting, sometimes ending only by the pursuer giving up the chase altogether, when a faster "*he*" is chosen.

CYCLING

When the cyclist has overcome the art of balancing himself the point which he next has to consider is the art of mounting. There are three methods of mounting, the easiest of which perhaps is that of mounting from the step. The cyclist stands with the back wheel of the bicycle between his legs, and grips the handle bar firmly. He then places his left foot on the step, a short metal bar projecting from the hub of the back wheel, and hops forward on his right foot, pushing the bicycle along. Two or three hops will give the machine sufficient impetus to keep it moving while the cyclist springs forward on to the saddle and places his feet on the pedals.

Another means of mounting is known as the "American" method. The cyclist stands beside his machine, gripping the handle bar, and places his left foot on the left pedal, or (if he be on the right side of his machine) his right foot on the right pedal. He then hops forward on the other foot to gain impetus till he can swing the foot on which he is hopping over the back wheel on to the other pedal, while at the same time seating himself on the saddle. In using the third method of mounting the cyclist seats himself on the saddle, and keeps his balance by resting one foot on the ground. With the other foot he pushes the pedal forward and thus sets the machine in motion, at the same time raising the balancing foot to its pedal.

The machine is guided by means of a handle bar connected with the front wheel, and also by the adjustment of the balance of the body. If the rider lean to the right his machine will turn in that direction, and vice versa. Thus an expert can ride and guide a bicycle without holding the handle bar.

The novice will find that at the outset he is not able to ride more than a few miles at a stretch, and continual practice is needed before a long journey can be undertaken.

Considerable advantages are gained by the use of a well-made machine, fitted with good inflated rubber tyres and strong brakes. It is also necessary that the saddle be of a comfortable shape and fitted with resilient springs. For wet weather mudguards are also a necessity, and many riders favour a gear case.

The accessories which should be in the possession of every cyclist include a pump, a bag of tools and a lamp. The lamp in general use is constructed to burn oil, though of recent years acetylene gas lamps and electric lamps, supplied by a small portable battery, have gained considerable favour.

An ingenious device known as a cyclometer, when affixed to the machine registers the number of miles covered, and is a necessary asset to the long-distance rider.

Cycling, originally purely a sport or exercise, has now become a recognized method of transit, though in addition it has made remarkable strides in the direction of sport, as the annual race meetings testify.

DRIVING

The rules of driving in Great Britain differ from the rules in most other countries in that the driver usually sits, not in the centre, but on the right hand side of the "box seat" on the vehicle which is being driven; and he keeps his vehicle to the left side of the road. To pass a vehicle on the road travelling in the same direction as himself he keeps the front object on his left, and takes again to the left hand side of the road to allow anything else to pass him.

The first principle a driver must learn is that he must not try and jerk at

the reins; not only does that hurt and damage the animal's mouth, but it militates against a steady and even progress. When a driver wishes to turn his horse, say to the left, he holds both reins quite as firmly as when keeping a straight course, but merely puts extra pressure upon the left rein. And similarly, when he wishes to turn to the right, pressure is put on the right rein. To clutch the reins one in each hand is not only ugly but cumbersome. Both straps should always be kept close together and held in each hand *not* horizontally in the fist, but passing through the fingers and parallel to the outstretched arm. The left hand, which is kept quite close to the body, should be held palm upwards, the right hand being held a few inches farther outwards and palm downwards. By holding the reins in such manner it will be seen how one hand may be released and still a control of the driven animal be maintained by the other hand.

A driver should keep his eyes fixed upon the horse's head, as it may be gathered which way a horse is looking by the direction in which he pricks his ears. A horse's ears are the best indication as to whether he is startled at any object in the road, and by keeping a watch on them the driver is always ready to cope with the possibility of the animal "shying."

MOTORING

The motor car is a carriage on "chassis" built upon a framework in which is contained an engine driven either by steam, electricity or petrol. The motor is controlled by a few levers in the box of the carriage, the driver or chauffeur being seated where the jehu of a horse carriage is seated. The strength of a motor is measured in horse power, and the ordinary touring car is usually fitted with an engine of from 20 to 40 h.p.

Motor cars are made far more elaborately than horse carriages and in innumerable forms, varying from omnibuses to landaus and phaetons to charabancs. The steam-driven car is gradually falling into desuetude, petrol and electricity rapidly gaining pre-eminence as the motive powers.

The motor-cycle is a heavily-made bicycle in the framework of which is fixed a small petrol-driven engine of varying horse power, rarely exceeding 4 or 5.

The engine of a motor-cycle is so built that it lies in the diamond frame below and in front of the saddle, so that the rider sits astride it. The engine is started at a slow speed by the cyclist pushing the bicycle along running beside it. This induces the first of a series of minor explosions, which convey the power to the cylinders, which is used for the propelling of the machine. Once the engine is started in this fashion, the cyclist—who must of course be able to manage an ordinary bike thoroughly—throws one leg over the saddle and increases the speed. His feet rest either upon "dumb pedals" or tiny platforms either side of the hub.

RACING

Into connexion with almost every game there enters the element of racing, a test of speed, a competition in which the players strive to get first to a specified mark.

The object of every race is to get "home" first. The simplest race is the foot race, wherein competitors start from a scratch line and run, each at his utmost speed, towards the tape which is stretched across the course. Foot races vary in length from 100 yards to long distance runs, which have recently adopted the somewhat classic title of Marathon races. The correct Marathon distance is 26 miles 385 yards. In the short distances the runners "sprint" all the way. In the longer runs a steady pace is maintained, being regulated by the distance to cover.

Walking races for similar distances are conducted, but the rules of walking races insist that competitors should walk in a certain style known as "heel and toe." To an inexperienced eye it is difficult to distinguish between a fast walk and a slow run, but by the observance or non-observance of the "heel and toe" rule a competitor is easily judged.

Foot races are competed either on turf or on a cinder track. In some cases the better men are handicapped. That is, they are put behind the weaker,

or "known-to-be-slower" competitors, who have not so far to go as "scratch" men. All start at the same time, but from different marks, though every competitor makes for the same winning point.

Cycle races are run on concrete or asphalt tracks usually. The cycle track is a large oval or circular path which slopes upwards and outwards at the curves. So many laps (a lap being once round the track) go to make the mile, and races are decided over all distances up to 100 miles. Occasionally a 24 hours' race is organised, when over 600 miles have been covered.

Horse races when "handicapped" are different in mode from the other races. Instead of one being given a start on another, the better horse is "weighted," and by such means is handicapped in that he has to carry more, and naturally cannot put his topmost free-speed into the race.

Swimming and boat races are always popular, conducted either in lake, river or sea, though the best short-distance swims are held in swimming baths.

Motor racing has not proved so popular as it might have. The latest and most novel kind of racing is that conducted with aeroplanes, and in France especially this has become a most popular and at the same time fashionable sport.

Pigeon racing differs from all other races, in that only the start and finish can be watched. A number of pigeons are taken to a certain spot miles away from their homes and are all simultaneously let loose. The birds find their divers ways home and as soon as they arrive their owners take the time and notify the starters. Methods of taking the time vary, but the most reliable is one adopted by many federations of flying clubs. It is this: to each pigeon is attached a ring with a certain number engraved upon it. When the pigeon arrives home, this ring is detached and put into a specially constructed clock which indicates the exact second when the ring was inserted. As the clocks in possession of the owners are regulated by the clock at starting point the exact time of flight is thus ascertained. The best fliers travel at about 1,000 yards per minute.

STOVES AND HEATING

THE open range is said to have only one strong point in its favour, namely, that it will roast in front of the fire; It is questionable whether it burns more coal than a close stove of the same capacity, for the careful housewife has various contrivances for reducing the consumption of fuel when the fire is not needed for roasting or baking purposes. Moreover, an oven heated from below is better adapted to the requirements of people who always have home-made bread and cakes; and who prefer baked hot-pots and meat stewed in an earthenware pot in the oven, to the more liquid and less savoury stews made in a saucepan. And when the production of heat and the consumption of fuel cannot be controlled, a close stove may prove quite as wasteful as an open grate, and less satisfactory in other respects.

Close Fire Ranges.—Coal ranges are made in many sizes and at varying prices, each maker claiming some special merit for his own particular production. The better kinds have various adjustments to facilitate the disposal and regulation of heat; and one or two well-known and deservedly popular ranges have a movable fire-box which may be raised when a small fire is required, thereby reducing the consumption of fuel. Some have oven doors packed inside with non-conduction materials, and lined with white porcelain enamel which is easily cleaned, and moreover reflects the light; while one maker of repute has recently introduced an oven with doors which swing open with the pressure of the foot on the pedal opener, leaving

both hands free. Few, if any, of these contrivances are found in the small-close stove supplied to artisan dwellings, but the housewife who is privileged to select her own range should make a point of securing some if not all of them.

The proper working of any range or stove depends chiefly on its being kept clean and in good order. When a range is in daily use the flue shutters and dampers should be removed and the passages freed from soot once a week; but where the ovens are of steel or sheet iron, it is absolutely necessary that all soot should be removed from the flues if the range is to be left out of use for any period longer than two or three days, soot draining moisture and having a strong corrosive action on steel.

How To Clean a Close Range.—The oven doors should be closed to keep out the soot, and the kitchen door and window closed to prevent soot flying about; all ashes and cinders should be cleared away. The flue shutters should be opened one at a time, and the soot swept down with a brush constructed for the purpose, beginning with the highest flue, located in the breast of the chimney, and sweeping down to the lowest soot door. If the soot be carefully raked from this point into a shovel, little mess will be made. The ovens should be washed with hot water and soda, the same means being employed when necessary to remove grease from the top or front of the range. The range should be quite dry before applying the black-lead, which will produce a more brilliant polish if moistened with

turpentine instead of water. The steel mouldings should be cleaned with paraffin and emery paper, or when badly stained with vinegar and bath brick.

Portable Stoves.—Within recent years this type of stove has been greatly improved. They are made in several sizes, with or without a boiler. When used in England the stove is usually placed in or near the recess provided for a range, and the iron tube passes into the chimney. But the stove may stand in any part of the room altogether independent of its surroundings, except the connecting tube of some eight or ten inches in diameter, which carries off the products of combustion. This tube passes to the outer wall and up the side of the house to a suitable level, otherwise there is a strong draught. When possible this arrangement should be avoided, for the tube frequently becomes red-hot, and has often been a source of danger in Colonial settlements where they are largely used.

Gas Stoves.—The cleanliness and convenience of gas cookery are generally admitted advantages, but the question of economy is a debated one. The best results are possibly obtained, from a culinary as well as a pecuniary point of view, when a gas stove of suitable size supplements the coal range. Where much cooking is done a gas stove is almost indispensable; and in small households gas at a reasonable price will be found economical in warm weather when fuel is consumed chiefly in the preparation of food.

Gas stoves may be hired from the local Gas Company, and as there is little difference in charges for varying sizes it is advisable to have a fairly large one, one that will allow a space of some three or four inches between the four sides of the oven and any joint or cake you are likely to cook. The inside and outer top of the stove should be lined with porcelain enamel in order that it may be easily kept clean. It should also be provided with a reversible grill, and a small ring for simmering purposes, otherwise gas will be wasted when only a little heat is required under a stewpan or kettle.

To Clean a Gas Stove.—The inside of

the stove, the inside of the door, and the enamelled top should be wiped over with a damp cloth after use while the stove is warm. At least once a week these parts should be thoroughly cleaned with hot water, soap, and a little bath brick or other fine gritty substance. Once a month all the bars and movable parts should be washed, even boiled, in strong soda and water, and thoroughly dried before being replaced. Thorough cleanliness lessens the consumption of gas by giving a stronger, clearer flame. It also prevents that unpleasant and needless gassy smell which so frequently attends the use of a gas stove.

Oil Stoves.—A well-constructed and properly managed oil stove will cook food as well as any other stove of corresponding capacity. Within recent years the construction of stoves of this description has been considerably improved, and they answer admirably in places not within the reach of gas. Cooking on an oil stove may be done 20 per cent. cheaper than by any other means, but unless the wicks are kept well-trimmed and the stove otherwise properly managed, it will emit a disagreeable smell and smoke.

The wick of the oil stove should fit evenly, and just fill the space provided for it, leaving neither a gap at the side nor undue pressure to force it into place. Wicks should never be cut, as it makes them burn unevenly. The wick after being turned up until level with the encasing sides, should have its edges smoothed with a used match or a piece of paper. The burners should be washed once a week, and the receptacle kept filled with oil, being careful to remove any soot or grit.

Cooking by Electricity.—The heat for this purpose is obtained from the ordinary electric lighting means, the current being made to pass through wires coiled on iron or steel plates, and embedded in enamel, having the same ratio of expansion and contraction as the metal. In this way the plates of ovens, hot-plates and grills can be heated. Kettles and stewpans have individual wires coiled in the space provided by a double bottom. The system has much to recommend it, but at present it is somewhat costly.

TABLES OF WEIGHTS, MEASURES, ETC.

TABLES OF WEIGHT

TROY WEIGHT.

By this weight gold, silver, jewels, and precious stones are weighed. It is also used in experiments in natural philosophy, and in ascertaining the strength of spirituous liquors.

Grains (gr.)	Pennyweights (dwts.).	Ounces (oz.).	Pound (lb.).
24	= 1	=	
480	= 20	= 1	
5760	= 240	= 12	= 1

Gold vessels, plate, or any manufacture of gold may be wrought of any of the standards of 22, 20, 18, 15, 12, or 9 carats fine gold in every pound Troy. Thus, when any article of gold plate or jewellery is spoken of as being 18 *carats fine*, we understand that of the gold used in its manufacture 18 parts are *pure gold*, and 6 parts copper; all alloyed gold, as said above, being considered as divided into 24 equal parts. The relative value of the *carat* of gold is 10 dwts.

Diamonds are weighed by *carats* of 4 grains, but 4 diamond grains are only equal to 3·2 grains Troy. 1 oz. Troy is equal to 150 diamond carats.

AVOIRDUPOIS WEIGHT.

This weight is used in almost all commercial transactions, and in all the common dealings of life.

Drams (dr.)	Ounces (oz.).	Pounds (lb.).	Stones (st.).	Quarters (qr.).	Hundwts. (cwt.).	Ton.
16	= 1					
256	= 16	= 1				
3584	= 224	= 14	= 1			
7168	= 448	= 28	= 2	= 1		
28672	= 1792	= 112	= 8	= 4	= 1	
573440	= 35840	= 2240	= 160	= 80	= 20	= 1

One dram is equal to 27½ grains Troy; 1 ounce or 16 drams to 437½ grains Troy, and 1 pound or 16 ounces to 7000 grains Troy.

APOTHECARIES' WEIGHT.

Apothecaries compound their medicines by this weight, which is only established by custom, and not by Act of Parliament.

Grains (gr.).	Scruples (sc. ʒ.).	Drachms (dr. ʒ.).	Ounces (oz. ʒ.).	Pound (lb.).
20	= 1			
60	= 3	= 1		
480	= 24	= 8	= 1	
5760	= 288	= 96	= 12	= 1

The grain in this measure is identical in weight with the grain Troy; and the pound and ounce are equal to those of Troy weight, only differently divided and subdivided.

APOTHECARIES' FLUID MEASURE.

Cubic Inches.	Minims (℥).	Drachms (ʒ).	Ounces (ʒ).	Pint (p).
0.27	= 60	= 1	= 1	= 1
2.16	= 480	= 8	= 1	= 1
53.20	= 9600	= 160	= 20	= 1

One fluid minim is equal to 0.0045 cubic inches.

TABLES OF MEASURE.

LINEAL OR LONG MEASURE.

By this measure are computed the lineal dimensions of all magnitudes, with the exception mentioned below.

Inches.	Feet.	Yards.	Poles.	Furlongs.	Miles.	League.
12	= 1	=				
36	= 3	= 1				
198	= 16½	= 5½	= 1			
7920	= 660	= 220	= 40	= 1	= 1	
63360	= 5280	= 1760	= 320	= 8	= 1	= 1
190080	= 15840	= 5280	= 960	= 24	= 3	= 1

The length of a mile is not the same in every country. The Scotch and Irish miles were formerly about 1½ English, but are now the same as English. A Spanish and Polish mile is about 3½ English. A Swedish, Danish, and Hungarian mile is from 5 to 6 English miles. A Russian mile or verst is about ½ of an English mile; and the French toise is about 6 feet.

The Dutch Mile .. = 8101 yards.	The Arabian mile .. = 2148 yards.
The Roman .. = 1628 "	The Persian parasang = 6086 "
1 Line .. = ¼ Inch.	1 Pace (geometrical) = 5 Feet.
1 Barleycorn .. = ⅓ Inch.	1 Fathom = 6 Feet.
1 Palm .. = 3 Inches.	1 Rod, Pole or Perch = 5½ yards.
1 Hand .. = 4 Inches.	1 Chain .. = 4 Poles or 22 yds.
1 Link .. = 7½ Inches.	1 League .. = 3 Miles.
1 Span .. = 9 Inches.	1 Degree (or °) = 60 Geographical miles, or 69½ English miles.
1 Cubitt .. = 18 Inches.	1 Knot (nautical) = about 2026 yds. (1½ miles).
1 Pace.. .. = 2½ Feet.	1 Kilometer .. = about 1093 yds

360 Degrees = The circumference of the Globe, or any circle.

The Hand is used for measuring the height of horses.

The Pace is a measure taken from the space between the two feet of a man in walking, usually reckoned at 2½ feet; but the Geometrical Pace is 5 feet.

The Fathom is used in sounding to ascertain depths, etc., and for measuring cordage.

SQUARE OR LAND MEASURE.

This measure is used for all kinds of superficial measuring, such as land, paving, flooring, roofing, tiling, slating, plastering, etc., and anything having length and breadth only.

Sq. Inches.	Sq. Feet.	Sq. Yards.	Sq. Poles.	Sq. Rods.	Sq. Acre.
144	= 1	=			
1296	= 9	= 1			
39204	= 272½	= 30½	= 1		
1568160	= 10890	= 1210	= 40	= 1	
6272640	= 43560	= 4840	= 160	= 4	= 1

Flooring, roofing, thatching, etc., are measured by the square of 100 feet, and bricklayers' work by the pole of $16\frac{1}{2}$ feet, the square of which is $272\frac{1}{2}$ feet, though this is partly a cubic measure, as the brickwork is reckoned to be 14 inches, or $1\frac{1}{2}$ brick thick.

The *imperial square yard* contains 9 imperial square feet, and the *imperial square foot* 144 imperial square inches; the *circular foot* (that is, a circle whose diameter is 1 foot) contains 113.097 square inches; and the *square foot* contains 183.346 circular inches (that is, circles whose diameters are each 1 inch).

LAND is measured by *Gunter's Chain*, which is as follows:—

Length.—7.92 inches make 1 link; 12 inches, or 1.515 links, make 1 foot; 36 inches, or 4.545 links, make 1 yard; 198 inches, or 25 links, make 1 pole or perch; 792 inches, or 100 links, or 66 feet, or 22 yards, or 4 poles, make 1 chain; 7920 inches, or 1000 links, or 10 chains, make 1 furlong; 63,360 inches, or 8000 links, or 80 chains, make 1 mile.

Square.—62.726 square inches make 1 square link; 2.295 square links make 1 square foot; 20.661 square links make 1 square yard; 625 square links make 1 square pole; 10,000 square links make 1 square chain; 25,000 square links, or 2.5 square chains, make 1 square rood; 100,000 square links, or 10 square chains, make 1 acre.

It should be remembered that 640 acres make 1 square mile. This is useful in converting superficial measurement by acres into square miles, and vice versa.

AN ACRE.—The following are the several dimensions:—Statute Acre, 4840 square yards; Leicestershire, 2308 $\frac{1}{2}$ square yards; Herefordshire, 3226 $\frac{1}{2}$; Wiltshire, 3630; Devonshire, 4000; North Wales (customary), 3240; ditto (erw), 4320; Cornish, 5760; Cunningham, 6250; Westmorland, 6760; Irish, 7840; West Derby, 9000; Cheshire, 10240; Scotch Standard acre, 6104.1281; Dumbarton, 6084, Inverness, 6150.4. A Scotch acre is $1\frac{1}{2}$ of an imperial acre.

SOLID OR CUBIC MEASURE.

A *cube* is a solid body, and contains length, breadth, and thickness, having six equal sides. A *cube number* is produced by multiplying a number twice into itself; thus, 64 is a cube number, and is produced by multiplying the number twice into itself, as $4 \times 4 \times 4 = 64$.

	Cubic Inches.		Cubic Feet.		Cubic Yard.	
	1728	=	1			
	46656	=	27	=	1	
40 Cubic Feet of Rough or						
50 Cubic Feet of Hewn		..	..	..	..	= 1 Ton or Load
Timber						
42 Cubic Feet of Timber	..	..	..	..	..	= 1 Shipping Ton.
108 Cubic Feet	..	..	..	..	..	= 1 Stack of Wood
128 Cubic Feet	..	..	..	..	..	= 1 Cord of Wood.

The English foot is to the French foot as 1 to 1.065977.

The English square foot is to the French square foot as 1 to 1.136307.

The English cubic foot is to the French cubic foot as 1 to 1.211277.

The *imperial cubic* (or solid) *yard* contains 27 imperial cubic feet, and the *imperial cubic foot* contains 1728 imperial cubic inches. The *cylindric foot* (that is, a cylinder 1 foot long and 1 foot in diameter) contains 135 $\frac{7}{17}$ cubic inches. The *spherical foot* (that is, a sphere 1 foot in diameter) contains 904.78 cubic inches; and a *conical foot* (that is, a cone 1 foot in height and 1 foot in diameter at the base) contains 452.39 cubic inches. The *cubic foot* contains very nearly 2200 cylindrical inches (that is, cylinders 1 inch long and 1 inch in diameter); it contains very nearly 3300 spherical inches (that is, spheres 1 inch in diameter) and it contains very nearly 6600 conical inches (that is, cones 1 inch in height and 1 inch in diameter at the base).

TABLES OF CAPACITY

LIQUID MEASURE.

Gills.		Pints.		Quarts.		Gallon.
4	=	1				
8	=	2	=	1		
32	=	8	=	4	=	1

IMPERIAL MEASURE. OLD MEASURE, FOR WINE, SPIRITS, ETC.

Gal.	Qt.	Pt.	Gills.	Gallons.			
8	1	0	2.58	=	10 ..	..	.. make 1 Anker.
14	3	1	3.87	=	18 ..	..	.. " 1 Rundlet.
34	3	1	3.70	=	42 ..	..	.. " 1 Tierce.
52	1	1	3.55	=	63 ..	..	.. " 1 Hogshead.
69	3	1	3.40	=	84 or 2	Tierces	.. " 1 PUNCHON.
104	3	1	3.11	=	126 or 2	Hhds.	.. " 1 Pipe or Butt.
209	3	1	2.22	=	252 or 2	Pipes	.. " 1 Tun.

IMPERIAL MEASURE, OLD MEASURE, FOR ALE AND BEER.

9	0	1	0.91	=	9..	..	.. make 1 Firkin.
18	1	0	1.83	=	18..	..	.. " 1 Kilderkin.
36	2	0	3.64	=	36..	..	.. " 1 Barrel.
54	3	1	1.45	=	54..	..	.. " 1 Hogshead.
109	3	0	2.90	=	108 or 2	Hhds.	.. " 1 Butt.
219	2	1	1.80	=	216 or 2	Butts	.. " 1 Tun.

The imperial gallon, the standard measure of capacity, both for liquids and for dry goods, contains 277.274 cubic inches; the gill, quartern, or noggin, contains about 8.66 cubic inches, and is equal to 5 ounces avoirdupois of distilled water.

DRY OR CORN MEASURE.

Gallons.		Pecks.		Bushels.		
2	=	1				
8	=	4	=	1		Quarter.
64	=	32	=	8	=	1

A *pottle* is 2 quarts; a *strike* is 2 bushels; and a *comb* 4 bushels; a sack is 3 bushels, and 12 sacks or 36 bushels, make a *chaldron*; 5 quarters, or 40 bushels is a *load* or *weight*; and 2 weighs make 1 *last*.

A bushel of wheat should weigh 60 lbs.; a bushel of barley, 47 lbs.; a bushel of oats, 40 lbs. Six bushels of wheat, or 360 lbs., should yield a *sack*, or 280 lbs. of fine flour. A sack, or 280 lbs. of flour, should make 100 quartern loaves, each weighing 4 lbs.

TIME TABLE.

Seconds.		Minutes.		Hours.		Days.		Week.
60	=	1	=					
3600	=	60	=	1				
86400	=	1440	=	24	=	1		
604800	=	10080	=	168	=	7	=	1

28 Days make 1 Lunar Month. 28, 29, 30, or 31 Days, 1 Calendar Month. 12 Calendar Months, 1 Year. 365 Days, 1 Common Year. 366 Days, 1 Leap Year. A Lunar day is 24 hours 48 minutes. The *Sidereal* is 3' 56" less than the Solar day.

METRIC SYSTEM OF WEIGHTS AND MEASURES

This system of measuring by decimal progression is borrowed from the French. The French system is based on the *metre* as a unit of length, the *metre* being a

line equal in length to the ten-millionth part of the fourth of a great circle of 360° passing round the earth through the poles. A cube measuring the tenth part of a metre every way was adopted as the unit of measures of capacity, and called a *litre*. The weight of distilled water contained in a litre was called a *kilogramme*, and the thousandth part of this, called a *gramme*, was fixed on as the unit of weight. The successive multiples by 10 of these units are distinguished by the prefixes *deca* (10), *hecto* (100, or 10×10), *kilo* (1,000, $10 \times 10 \times 10$), and *myria* (10,000, or $10 \times 10 \times 10 \times 10$), taken from Greek words meaning ten, hundred, thousand, and ten thousand, while their successive subdivisions by 10 are noted by the prefixes *deci* ($\frac{1}{10}$), *centi* ($\frac{1}{100}$), and *milli* ($\frac{1}{1000}$), are taken from Latin words meaning ten, hundred, and thousand.

MEASURES OF LENGTH.

c.

Metric Terms.		Metres.				Yds.	Ft.	In.
Millimètre	.. = ..	$\frac{1}{1000}$	.. = ..			0	0	0.0394
Centimètre	.. = ..	$\frac{1}{100}$	.. = ..			0	0	0.3937
Decamètre	.. = ..	$\frac{1}{10}$	.. = ..			0	0	3.9370
METRE	.. = ..	1	.. = ..			1	0	3.3708
Decamètre	.. = ..	10	.. = ..			10	2	9.7079
Hectomètre	.. = ..	100	.. = ..			109	1	1.079
Kilomètre	.. = ..	1000	.. = ..			1,093	1	10.79
Myriamètre	.. = ..	10000	.. = ..			10,936	0	11.9

MEASURES OF SURFACE OR SQUARE MEASURE.

Metric Terms.		Ares.		Sq. Metres.		Acres.	Sq. Yds
Centiare	.. =	$\frac{1}{100}$	.. =	1	.. =	0	1.1960
ARE	.. =	1	.. =	100	.. =	0	119.6033
Kectare	.. =	100	.. =	10000	.. =	2	2280.3326

MEASURES OF CAPACITY.

Metric Terms.		Litres.		Cubic Metres.		Gals.	Qts.	Pints.
Millilitre	=	$\frac{1}{1000}$	.. =	$\frac{1}{1000000}$	.. =	0	0	0.00176077
Centilitre	=	$\frac{1}{100}$	.. =	$\frac{1}{100000}$	.. =	0	0	0.0176077
Decilitre	=	$\frac{1}{10}$	.. =	$\frac{1}{10000}$	.. =	0	0	0.176077
LITRE	=	1	.. =	$\frac{1}{1000}$	.. =	0	0	1.76077
Decalitre	=	10	.. =	$\frac{1}{100}$	.. =	2	0	1.6077
Hectolitre	=	100	.. =	$\frac{1}{10}$	.. =	22	0	0.077
Kilolitre	=	1000	.. =	1	.. =	220	0	0.77
Myrialitre	=	10000	.. =	10	.. =	2200	3	1.7

MEASURES OF WEIGHT.

Metric Terms.		Grammes.		(Avoir.)	Lb.	Oz.	Drams.
Milligramme	.. =	$\frac{1}{1000}$	.. =	..	0	0	0.00056438
Centigramme	.. =	$\frac{1}{100}$	.. =	..	0	0	0.0056438
Decigramme	.. =	$\frac{1}{10}$	.. =	..	0	0	0.056438
GRAMME	.. =	1	.. =	..	0	0	0.56438
Decagramme	.. =	10	.. =	..	0	0	5.6438
Hectogramme	.. =	100	.. =	..	0	3	8.438
Kilogramme	.. =	1000	.. =	..	2	3	4.38
Myriagramme	.. =	10000	.. =	..	22	0	11.8

INCOME TABLE.

Giving the Amount of Income per Calendar Month, Week, and Day, at any Sum per Annum, from £1 to £10,000.

Per Year.			Per Cal. Month.			Per Week.			Per Day.			Per Year.			Per Cal. Month.			Per Week.			Per Day.		
£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
1	0	0	0	1	8	0	0	4	0	0	0	60	0	0	5	0	0	1	3	1	0	3	3
2	0	0	0	3	4	0	0	9	0	0	1	70	0	0	5	16	8	1	6	11	0	3	10
3	0	0	0	5	0	0	1	1	0	0	2	80	0	0	6	13	4	1	10	9	0	4	4
4	0	0	0	6	8	0	1	6	0	0	2	90	0	0	7	10	0	1	14	7	0	4	11
5	0	0	0	8	4	0	1	11	0	0	3	100	0	0	8	6	8	1	18	5	0	5	5
6	0	0	0	10	0	0	2	3	0	0	4	200	0	0	16	13	4	3	16	11	0	10	11
7	0	0	0	11	8	0	2	8	0	0	4	300	0	0	25	0	0	5	15	4	0	16	5
8	0	0	0	13	4	0	3	1	0	0	5	400	0	0	33	6	8	7	13	10	1	1	11
9	0	0	0	15	0	0	3	5	0	0	6	500	0	0	41	13	4	9	12	3	1	7	4
10	0	0	0	16	8	0	3	10	0	0	6	600	0	0	50	0	0	11	10	9	1	12	10
11	0	0	0	18	4	0	4	2	0	0	7	700	0	0	58	6	8	13	9	2	1	18	4
12	0	0	1	0	0	0	4	7	0	0	8	800	0	0	66	13	4	15	7	8	2	3	10
13	0	0	1	1	8	0	5	0	0	0	8	900	0	0	75	0	0	17	6	1	2	9	3
14	0	0	1	3	4	0	5	4	0	0	9	1000	0	0	83	6	8	19	4	7	2	14	9
15	0	0	1	5	0	0	5	9	0	0	9	2000	0	0	166	13	4	38	9	2	5	9	7
16	0	0	1	6	8	0	6	1	0	0	10	3000	0	0	250	0	0	57	13	10	8	4	4
17	0	0	1	8	4	0	6	6	0	0	11	4000	0	0	333	6	8	76	18	5	10	19	2
18	0	0	1	10	0	0	6	11	0	0	11	5000	0	0	416	13	4	96	3	1	13	13	11
19	0	0	1	11	8	0	7	3	0	1	0	6000	0	0	500	0	0	115	7	8	16	8	9
20	0	0	1	13	4	0	7	8	0	1	1	7000	0	0	583	6	8	134	12	3	19	3	6
30	0	0	2	10	0	0	11	6	0	1	7	8000	0	0	666	13	4	153	16	11	21	18	4
40	0	0	3	6	8	0	15	4	0	2	2	9000	0	0	750	0	0	173	1	6	24	13	1
50	0	0	4	3	4	0	19	2	0	2	9	10000	0	0	833	6	8	192	6	1	27	7	11

VARIOUS WEIGHTS AND MEASURES.

Anchovies, barrel of . . . 30 lbs.
 Angle, right (angular meas.) . . . 90 degrees.

Barley, bushel of . . . 47 lbs.
 Beer, barrel of . . . 36 galls.
 — hogshead of . . . 54 galls.
 Bricks, load of . . . 500 bricks.

Bricks.—A solid yard of well-wrought clay will make 460 bricks. Thirty-two common bricks will cover a square yard. A common brick must not be more than 9 inches long, $4\frac{1}{2}$ inches wide, and $2\frac{1}{2}$ inches thick.

Butter, firkin of . . . 56 lbs.
 — Irish, firkin, of, about . . . 56 lbs.
 — tub of . . . 84 lbs.
 — barrel of . . . 2 cwt.
 — Dutch, cask of . . . 1 cwt.

Claret, hogshead of . . . 46 galls.
 Cocoa, bag of . . . about 1 cwt.
 Coffee, tierce of . . . 5 to 7 cwt.
 Coffee, barrel of . . . 1 to $1\frac{1}{2}$ cwt.

Coffee, bag of . . . $1\frac{1}{2}$ to $1\frac{1}{2}$ cwt.
 — Mocha, bale of . . . 2 to $2\frac{1}{2}$ cwt.
 — robin of . . . 1 to $1\frac{1}{2}$ cwt.
 Copperas, hhd. of . . . 16 to 20 cwt.
 Corn, bushel of . . . 8 galls.
 — quarter of . . . 8 bushels.
 — last of, 10 quarters . . . 80 bushels.
 Cotton, bale of . . . 200 to 500 lbs.
 Currants, butt of . . . 15 to 20 cwt.

Flour, barrel of . . . 196 lbs.
 — gallon of . . . 7 lbs.
 — peck or stone of . . . 14 lbs.
 — boll of, 10 pecks or st. . . 140 lbs.
 — sack of, 2 bolls . . . 280 lbs.
 Foot, at Paris . . . 12·816 Eng. in
 — at Boulogne . . . 15 Eng. in
 — Dantzic . . . 11·328 Eng. in
 — Danish . . . 12·504 Eng. in
 — Swedish . . . 11·733 Eng. in

Gallon, standard, 10 lbs. avoird. of distilled water.
 „ „ . . . 277 $\frac{1}{4}$ cubic in.
 German mile . . . 5,866 Eng. yds.

Gunpowder, barrel of	1 cwt.	into 12 leaves is termed	12mo.
— a last, 24 barrels or	2,400 lbs.	" 16 " "	16mo.
Hand for measuring horses	4 inches	" 18 " "	18mo.
Hay, new, load of . .	19 cwt. 32 lbs.	" 24 " "	24mo.
— truss of	60 lbs.	" 48 " "	48mo.
— old, load of	18 cwt.	Parchment, roll of .	60 skins.
— truss of	56 lbs.	Peas, bushel of . .	64 lbs.
Herrings, barrel of .	500 herrings.	Rainfall.—An inch of rain equals a gallon of water spread over a surface of about two square feet or 3630 cubic feet. This is equivalent to about 21,780 gallons of water to the acre.	
Hides, dicker of . .	10 skins.	Rice, E.I. bag ^s of about	1½ cwt.
— last of	20 dickers.	— American, cask of	6 cwt.
Hops, pocket of . .	1½ to 2 cwt.	Rum, puncheon of .	90 to 100 galls.
— bag of . nearly	2½ cwt.	— hogshead of . .	45 to 50 galls
Lead, fodder of . .	19½ cwt.	Russian mile or verst	1,100 Eng. yds.
Lead, sheet, is from 6 lbs. to 10 lbs. to the square foot. A pipe of an inch bore is commonly 13 lbs. or 14 lbs. to the yard in length.		Rye, bushel of . . .	53 lbs.
Loaf, quartern . . .	4 lbs.	Salt, peck of . . .	14 lbs.
Log-line.—That used in the navy is about 450 feet long, having usually eight separate distances, of one knot each, or 48 feet, marked thereof.		— bushel of . . .	56 lbs.
Long dozen	13 articles.	Salt, rock, bushel of.	65 lbs.
Long gross	156 articles.	Scottish and Irish mile	2,200 Eng. yds.
Mace, case of about	1½ cwt.	Semicircle (angular meas.)	180 degrees.
Oats, bushel of . .	40 lbs.	Sextant (angular meas.)	60 degrees.
Oil, tun, wine mea- sure	252 galls.	Sherry, pipe or butt of	108 galls.
tun, imperial measure	210 galls	Soda, cask of . . .	3 to 4 cwt.
— imperial gallon of	9½ lbs.	Spanish league . .	5,027 Eng. yds.
— fish, tun of . . .	252 galls.	Straw, load of . .	11 cwt. 64 lbs.
— seed, tun of . . .	236 galls.	— truss of	36 lbs.
— Spermaceti, gal- lon of	8 lbs.	Swedish mile . . .	7,233 Eng. yds.
Olive Oil, chest of 60 flasks of . . .	125 galls.	Tallow, cask of . .	about 9 cwt.
— jar of	25 galls.	Tapioca, barrel of	about 1½ cwt.
An imperial gallon of whale or seal oil should weigh 9 lbs. ; of sperm		Tar, barrel of . . .	26½ cwt.
Paper, printer's		Tea, chest of, about	84 lbs.
ream of	500 sheets.	— Hyson, chest of .	60 lbs.
— quire of	24 sheets.	— Twankay, chest of	80 lbs.
— ream of, 20		Tiles, load of . . .	1,000 tiles.
quires, or	480 sheets.	Timber, unhewn, load of	40 cubic feet.
Paper, sheet of, folded—		Tobacco, hogshead of	12 to 18 cwt.
into 2 leaves is termed folio size.		Ton, in number . .	42 bushels
" 4 " " " 4to, or		Wheat, bushel of .	60 lbs.
" 8 " " " 8vo, or		Whisky, Scotch, puncheon of . . .	112 to 120 galls.
octavo.		Wine, tun of . . .	252 galls.
		— pipe or butt of .	126 galls.

TABLE OF DIGESTIBILITY

FOOD.	PREPARATION.	TIME		FOOD.	PREPARATION.	TIME.	
		hrs.	mins.			hrs.	mins.
Apples, sweet	Raw	1	30	Liver (calves')	Fried	2	30
" green	Stewed	1	35	" (ox)	"	3	0
Asparagus	Boiled	1	30	Lamb	Grilled	2	30
Beans	Boiled	2	30	Lentils	Boiled	2	30
"	Purée	1	30	Milk	Raw	2	15
Beef, lean	Roasted	3	0	"	Boiled	2	0
" tender	Stewed	2	45	Mutton	Boiled	3	0
Beefsteak	Grilled	3	0	" lean	Roasted	3	15
Beef, fresh salted	Boiled	2	45	Nuts	—	5	0
" old salted	"	6	0	Oysters	Raw	2	55
Beets	Boiled	3	45	"	Stewed	3	30
Brains	Boiled	1	35	Onions	Stewed	3	30
Bread, fresh	Baked	3	30	Peas	Boiled	2	30
Butter	Melted	3	30	Pig, sucking	Roasted	2	30
Bread and Butter	—	3	45	Pork, fat	Roasted	5	15
Cabbage	Boiled	3	30	" salt	Boiled	3	15
"	Pickled	4	30	Potatoes	Fried	2	30
Celery	Boiled	1	30	Rice	Boiled	1	0
Chicken	Boiled	2	0	Salad	Raw	3	15
"	Fricassee	2	45	Sausage	Grilled	3	30
Cheese, old	—	3	30	"	Smoked	5	0
Custard	Boiled	2	45	Suet	Boiled	5	30
Duck	Roasted	4	0	Sago	Boiled	1	35
Eel	Roasted	6	0	Soles	Fried	3	0
Eggs, fresh	Raw	2	0	Spinach	Stewed	1	30
"	Soft boiled	3	0	Salmon, fresh	Boiled	1	30
"	Hard boiled	4	0	" smoked	"	4	0
"	Whipped (raw)	1	30	Stone Fruit	Raw	0	0
"	Scrambled	3	10	Tapioca	Boiled	2	0
Fish	Boiled	2	30	Tripe	Boiled	1	0
"	Fried	3	0	Trout	Boiled	1	30
Fowls	Boiled	4	0	Turkey	Roasted	2	30
"	Roasted	4	0	"	Boiled	2	15
Game (most kinds)	Roasted	4	15	Turnips	Boiled	3	30
Goose	Roasted	2	30	Veal	Roasted	4	30
Hashed meat	Warmed	2	30	Venison	Grilled	1	40

METRICAL AND ENGLISH WEIGHTS AND MEASURES.

Mètre = 39.3708 in. = 3.281. 3ft.

 $3\frac{1}{8}$ in. = 1.0936 yd.Square Mètre (mètre carrée) = $1\frac{1}{4}$ sq. yd. = (1.196).

Are (or 100 sq. mètres) = 119.6 square yards.

Cubic Mètre (or Stere) = $35\frac{1}{2}$ cubic feet.Centimètre = $\frac{1}{2}$ inch.Kilomètre = 1093 yards = $\frac{1}{2}$ mile.10 Kilomètres = $6\frac{1}{2}$ miles.100 Kilomètres = $62\frac{1}{10}$ miles.Square Kilomètre = $\frac{1}{4}$ square mile.Hectare = $2\frac{1}{2}$ acres (2.471).

100 Hectares = 247.1 acres.

Gramme = $15\frac{1}{2}$ grains (15.432).10 Grammes = $\frac{1}{2}$ oz. Avoirdupois..5 Grammes = $\frac{1}{2}$ oz. do.Kilogramme = $2\frac{1}{2}$ lbs. (2.2) Avoirdupois.

10 Kilogrammes = 22 lbs. do.

Metrical Quintal = $220\frac{1}{2}$ lbs. do.

Tonneau = 2,220 lbs. do.

Litre = 0.22 gallons (1 $\frac{1}{5}$ pints).

Hectolitre = 22 gallons.

THE TOILET

THE BATH

There is nothing so refreshing and exhilarating as a bath, be it the cold morning douche, the warm one at night, or a dip in the briny ocean. The first braces those who are able to indulge in it for the day's work ahead of them; the second revives and soothes the aching and weary body beyond all else, and the third gives tone to a system that is suffering from over-work or fatigue.

Daily Ablutions.—With regard to the best way of washing the face, so much depends upon the nature of the skin that it is difficult to lay down any hard and fast rules. Dwellers in town should, however, use warm water, as cold is quite powerless to remove the dust and dirt that are inseparable from a town existence. The soap that is used for the face should be especially good and not strongly scented. Plenty of water should be applied after the soap, so as to wash it all away. Particular pains should be taken to thoroughly cleanse the ears, where dust is always liable to lodge, round the eyes, nose, and mouth. The drying process should be equally thorough, as a hurried rub opens the way to all sorts of roughnesses and chappings. When drying the face rub upwards toward the nose. This will do much to prevent wrinkles.

When washing the hands don't depend entirely upon soap and water. Have a small brush to scrub them, a cake of pumice-stone to remove stains, and some borax to whiten them.

Soaps.—Great care should be taken in the choice of soaps used to wash the skin. It is not always the most expensive or the prettiest soaps that are the purest and safest. The senior surgeon at one of our leading institutions for the treatment of skin diseases, has affirmed that they have had about four hundred cases of skin trouble owing their origin only to improper

toilet soaps, and from this fact alone the importance of selecting a good and pure preparation may, in some degree, be estimated. But even when the very best soap is used it should be most carefully washed off again, otherwise it will cause an unbecoming gloss to appear and remain on the skin, and also clog the pores with an effect scarcely less than that of dirt itself.

Sponges.—The sponge used in the bath should be large and of very open pores, so that it may contain a large quantity of water, which may be poured from it over the shoulders and back. On every washstand there should be a smaller sponge to be used for the face, neck, and arms, on occasions when the bath itself is inexpedient or inconvenient; and a small "eye-sponge" should also be provided. When a sponge becomes disagreeably sticky, it may be restored to condition by covering it with clean cold water, into which the juice of a lemon has been squeezed. After remaining in this for an hour or two, the sponge will be quite ready for use again.

The best sponges are the cheapest in the end, even though they may be treble the cost of the common sponge. There is nothing to equal the sponge for rinsing and bathing purposes.

The Complexion.—Many people fall into the very common error of thinking that a good complexion can be gained by the use of external remedies, whereas the fundamental and principal cure is only obtainable by strict attention to health, by regular habits, and by a happy and contented condition of mind. The latter plays an important part in the gaining and preservation of a healthy, beautiful complexion.

A dull, earthy skin is generally seen in those people who are of a phlegmatic temperament, who are the victims of indigestion, and who, either from inclination or from necessity, lead a

sedentary and inactive existence. A close, vitiated atmosphere and poor living are also frequently responsible for a pasty, muddy complexion, although in some cases it is natural, as a good complexion is in others. As a result of the above-mentioned sedentary life, the circulation becomes languid and sluggish, and the first step toward improving the skin is to go in for a thorough course of active physical exercise. The diet must be generous, but light, and all excesses avoided. No outward applications can clear the skin, although, occasionally, they may assist Nature in doing so.

Paleness of the complexion is often one of the signs of anæmia—a complaint from which many women, and especially young girls, suffer. For these an indoor life is exceedingly undesirable, and they should make every effort to be out in the fresh air as much as possible. A course of iron and cod-liver oil is beneficial, and the diet should consist of milk, farinaceous foods, and some red wine, such as Burgundy.

Dyspepsia is frequently the main factor in producing sallowness, but it must be borne in mind that this is often hereditary. Bilious people nearly always possess this kind of complexion, the liver being the root of the evil. Such persons should pay great attention to their food, avoiding all excesses of the table, and taking plenty of exercise—thus to stir into activity their sluggish liver. Tea and coffee, and spirits of all kinds, are most injurious to any one who is wishful to have a healthy and clear complexion, whilst milk, on the other hand, cannot be too highly recommended.

Indigestion is responsible for more skin eruptions, pimples, red noses, flushings, and sallowness and pastiness of the complexion, than is ever imagined. Women try in vain to get rid of these blemishes by outward applications, and take inward blood-purifiers, and other remedies with the same purpose, but although they do not know it, it is indigestion they have to attack, and until this is cured, there is little hope of the blemishes disappearing. The most common skin eruption due to indigestion is nettle-rash,

although acne and other diseases are also caused by it. The skin becomes dried up and shrivelled, through the weak or defective circulation of the blood, which supplies it with nutriment. The patient should have recourse to friction, daily baths, and plenty of exercise, and be very careful as to diet. A pasty, sallow skin arises from the sluggish action of the liver, or congestion, and this is curable by the same means.

One of the best and simplest remedies for a mild attack of indigestion is hot water. This should be sipped slowly, as hot as it can possibly be taken, the last thing at night, and occasionally during the day.

For redness of the nose caused by indigestion, besides attention to internal remedies, this lotion may be dabbed on to the nose three or four times a day: Four drachms of oxide of zinc, four drachms of simple tincture of benzoin, elderflower water to five ounces. Shake the mixture well before applying it.

Sound and refreshing sleep has a most beneficial effect upon the complexion. After unusual fatigue, the face of even a young woman has a drawn and tired look which ages it palpably. Even a quarter of an hour's sleep removes this and replaces it by the soft commingling of white and pink which is the characteristic of the finest blonde complexion, or the rose and olive of the brunette.

The person who takes a proper amount of exercise, is fond of fresh air, eats moderately of food that agrees with him, or her, and is most particular with regard to cleanliness, is almost sure to have a clear, bright, healthy skin.

Freckles.—People who are subject to freckles should be careful to protect themselves as much as possible from the sun. To remove freckles use the lotion recommended on page 160 of this work.

Cucumber, sliced, and soaked for a few hours in milk, is good for sunburn. Bathe the face two or three times a day with it. Dry carefully and on no account use a hard towel.

Acne, or Blackheads.—These little black spots are frequently to be seen

on the faces of some people, especially in hot weather. They are formed by the accumulation of the indurated solid matter of the perspiration in the pores of the skin. It is a common practice to force them out by pressure of the fingers, but that causes a slight swelling, and they are more successfully removed by the use of vapour-baths, or steaming the face, and friction, assisted by a mild lotion which prevents their re-forming.

Advice as to treatment will be found on page 155.

People who suffer from acne should not drink tea or coffee, but cocoa or warm milk instead. They should not eat pastry, sauces, cheese, or any highly seasoned dishes, but plenty of fruit, tomatoes, and well-cooked green vegetables. At night the face should be washed in *hot* water, and well steamed, rubbing a little good eau-de-Cologne into the skin. Face powder should never be used.

Cosmetics.—It is better, if possible, not to use powder or any other preparation that will clog up the pores of the skin, but when the face burns after washing there is no injury done by applying a little *pure* powder.

Many paints used for the face are composed of mineral substances, and in consequence they are most harmful and injurious to the skin. There is no metallic pigment so innocent that it can be laid on the skin continuously without incurring serious damage. If any colouring be used for the cheeks a little good rouge is the only substance that ought to be employed. The rouges used principally in theatres are prepared from an Eastern flower, called the safflower, and from Brazil wood lake. The blossoms contain a colouring matter known as carthamite, from which are obtained some exquisite tones of scarlet and a delicate rose colour. Liebig was the discoverer, of an animal product entitled alloxan, which is said to give the "sympathetic" blush to the pale or wan cheek of beauty. Alloxan is, in itself, colourless, but it becomes oxidized by exposure to the air, and turns to a deep rose hue, which stains the cheek pink.

Of paints used for the face there are about half a dozen, the principal being

white, blue, red, and black. White paints, as they contain that poisonous ingredient white lead, are highly dangerous, leading frequently to blood poisoning. Red are equally so, as they are made with salts of mercury, vermilion, and other reprehensible substances when used in cosmetics, although there is one harmless red paint made with carmine of safranum, rouge of carthem; but the carmine of cochineal is almost as bright and is also harmless. Veining is done by means of indigo and talc, which forms a blue paint known as "lazulite."

A basis of black or Indian paint is lamp-black, and this is used for painting the eyes, a substitute being the pencil called "fard indien."

Powders are made of a variety of substances, the vegetable ones being the most harmless, those containing mineral ones being highly injurious. Amongst the first-named are rice wheat, and potato starch, while the latter include such ingredients as mercury, arsenic, lead, oxide of zinc, bismuth, etc. There is much variety of opinion with regard to the last-named substance, popular prejudice being decidedly against its use; whilst some skin specialists affirm that it is entirely free from anything that can harm the complexion.

Violet powder is one of the most simple of powders, and is composed of six parts of wheat starch, and one of powdered orris root. These are mixed together and scented with lemon, bergamot, and clove. Frequently, wheat starch is used alone, and "poudre de riz" is rice starch scented to taste. Pearl powder is a mixture of bismuth and chalk, or zinc and chalk, and the drawback to this is that the zinc and bismuth gradually turn black when exposed to emanations from the skin, or in the atmosphere of a crowded room. In the day time it has a bluish appearance, which gives a somewhat unnatural colour to the complexion. Mineral powders adhere much better to the skin than do vegetable ones; hence, perhaps, their employment in so many advertised kinds. Rice powder has very little adherence, but corn starch forms the base of nearly all face powders. This, and indeed all, is

highly absorbent, and takes up not only any superfluous moisture, but also the natural oil of the skin, and this is why its daily and persistent use dries up the skin and diminishes its softness and pliancy. If this were only done occasionally, the skin would resume its natural condition as soon as its application was abandoned. A really pure powder is sometimes beneficial when the face, neck and shoulders are plunged into a heated and vitiated atmosphere at some evening assembly, held in crowded rooms.

Powders for the face should be ever so slightly perfumed; if too much so, they frequently cause nervous affections and severe headaches.

Despite the apparent ease of powdering, there is a great art in putting it on the face. Many women have the mistaken idea that the thicker it is laid on the better it looks, but this is a great fallacy. It should be applied with the greatest care and its presence should be unseen by any one. There are three different tints of face powder, namely, pink, yellow, and white. The latter should never be used, as it shows so plainly on the skin. Women with sallow or colourless skins should use the second and those with delicate pink-and-white complexions the first-named.

Powders may be said to be applied to the face with two objects, one of which is to dry it thoroughly after washing, but this can be done equally well without its aid by gently wiping it with a piece of soft chamois leather. The second object is to leave a layer of powder upon the face so as to obscure some defects, or to give it a smooth, even complexion. In the former place it is applied by means of a powder puff, and then removed with a soft cloth. A yet better plan is to apply it with a piece of chamois leather. When it is desired to leave the powder on the face, usually some oily substance, such as cold cream, is first spread thinly upon the skin, which then retains it better than when applied without such a foundation.

All women should be warned against tampering with their health by taking any of the much-advertised preparations, which promise all kinds of

impossible, if desirable, results from their use. Outward applications are equally to be guarded against, unless their harmlessness and purity have been proved by competent authorities.

All applications intended for renovating and improving the skin are much more effectual if used at night than during the day.

If any serious disfiguring marks on the face have to be hidden, the only way to do it is by putting grease-paint over the mark and powdering over that. Grease-paint is a soft, very thick grease, sold in sticks by theatrical costumiers, and can be had in every conceivable tint, to suit all complexions. It should first be warmed, then rubbed gently on, spread with a soft handkerchief, and rubbed off with another. To cover a scar or bruise, apply more thickly. A little vaseline will remove grease paint very quickly. After using grease paint, or rouge, or anything in the way of "make-up," wash your face—at least wash the paint off—with cold cream or vaseline before touching it with water.

Unless necessary, as we have said before, do not use powders and paints for the skin in an ordinary everyday way; but if you *do* use them let them be pure and of the very best kind.

THE HAIR

Quite half the effect of one's appearance depends on successfully "doing the hair," and certainly half the trouble of the toilet is concerned with this process. When it is thick and of a pretty colour, and when the head is well shaped, the difficulty is but small. But whatever be the tint or quantity of one's hair, it cannot look its best unless well brushed and regularly washed. The very best brushes should always be chosen, and with them the hair should be given about one hundred strokes a day. The bristles of the brushes should not be so hard as to drag the hair out by the roots in case of a tangle obstructing the brush's course. Nor should they be too yielding. It is useless to brush the hair unless the skin of the head be brushed as well. The friction stimulates it and makes the hair grow. Slow and languid

strokes of the brush are simply useless; vigour and intention are necessary to produce a really good effect, and induce the bright healthy gloss that young hair should have.

Once in every six weeks the head and hair should be thoroughly washed, and oftener in winter, when coal-fires make so much dust in even the best-kept houses. A little borax in the water makes an excellent wash for the hair. Plenty of warm water, free from lather, is needed after the process of cleansing has been gone through. Yolk of egg also makes a splendid wash for the hair, but even greater care is needed after its application than is the case with borax. Otherwise the hair will be sticky when dry. No time should be lost in drying the hair, or a dangerous chill may be caught. The best way to dry it quickly and thoroughly, after a good rub with dry towels, is to sit in front of a fire, and still rubbing, allow the heat to fall on the back, sides, and top of the head alternately.

In cold weather half a wineglassful of spirit, such as brandy, whiskey, rum or gin, should be rubbed well into the skin of the head to fortify it against a chill. Never do the hair up until it is perfectly dry, and shake it well before beginning to brush and comb it after the bath.

Very often a good rubbing of the skin of the head serves to stimulate the growth of the hair. This ought to be repeated twice a week, and the friction be so vigorous that the skin becomes red and glowing.

Another useful experience for the hair is that of being allowed to float freely about for an hour or so, that the air may circulate through it.

Sunshine is particularly good for the hair as it brings out the colour as nothing else can.

Cantharides makes an excellent hair-wash, when used in combination with certain other ingredients, but it is only useful when seldom and sparingly used. Oil of mace is a good stimulant and holds no such risk as cantharides. It is generally used with spirits, such as whiskey, brandy, or rum, being well rubbed into the skin of the head. If it does not make it red and glowing,

friction with a coarse towel or a piece of flannel should be applied.

Hair-brushes should be kept scrupulously clean. They should be frequently washed in warm, but not boiling, water, into which some borax has been put. The brushes should be dabbed up and down in the water until the bristles are quite clean. They must not be placed too near a fire to dry or the varnish upon the wood will be injured, and, in the case of ivory-backed brushes, the ivory is likely to split if too much heat be applied.

To keep the hair and scalp both in a healthy condition it is necessary that they should be kept perfectly clean. It is an erroneous idea to suppose that by washing alone this can be accomplished; for, if too often done, its effect is to make the hair rot and turn grey; but at times it is required to remove dirt or dust. The extreme length of some hair renders the process of washing it both troublesome and inconvenient. The application of a good wash may be substituted with advantage, and if followed by the patient and assiduous use of a good hairbrush, it will be found sufficient. The use of a fine comb also helps to remove dust and clean the scalp.

False Hair.—It is sometimes necessary to wear false hair after having the natural hair cut off after illness, or because it has grown too thin to dress becomingly without some addition. There can be no objection to this, for we should all endeavour to make our hair the ornament it was intended to be; but it seems absurd for persons still possessing an abundance of hair of their own to add false to it. Not only that, it is better to avoid wearing false wherever possible, as it injures the natural growth by keeping the skin of the head too hot and thus impeding its functions and hindering its productiveness.

False hair should be very carefully introduced into the hair upon the head and not put on to it as it were separately, as we often see done, with the result that every one can see it is not part of the growing hair. If a long tail of hair be put into the hair proper when loose and twisted up with it, it is very difficult to tell that

any addition has been made. Combs should be saved, particularly from very long hair, as they can be made up by a good hairdresser to supplement the hair that remains on the head.

Hair Dyes.—Hair dyes are always a mistake, and some are most dangerous. Many of the dyes which turn the hair dark contain lead, and this often results in mischief to the eyes, and, if persevered in, ends in paralysis.

It is sometimes possible to prevent the hair turning grey, though impossible to make it brown or black again after the colour has gone out of it. After a long illness or a condition of low vitality from grief or depression, the hair often begins to turn grey in the prime of life. A good hairdresser should at once be consulted, and he can usually find some remedy. To cut an inch or two from the ends occasionally helps in the restoration of the colour of the hair. But there are great possibilities of picturesqueness in grey hair. It has been known to impart an aspect of refinement to features that, with hair of more vivid tinting, lacked such distinction.

Quite white or silver hair, if it be sufficiently plentiful, is generally admired both upon old and young.

The most harmless way of dying the hair golden is by the use of peroxide of hydrogen. First, well wash the hair with a little soda in the water to extract all grease, and let it be thoroughly dry before using the peroxide. Rub the dye well into the roots of the hair with a small sponge or flannel, and do not forget that if you spill it upon anything coloured it will take the colour out and leave a golden spot. When you have well saturated the roots of the hair, take a clean brush and brush the hair thoroughly till it is all damp with the peroxide. Then leave it hanging down to dry. Repeat this for two or three following days till the desired golden tint is gained, after that an occasional sponge with it should keep it the same colour. Be careful always to brush it well into the roots or they will look dark, and must certainly betray the dye.

Condyl's Crimson Fluid is good for

darkening the hair. Put half a wine-glassful in ten wine-glassfuls of water, and wash the hair with it twice a week.

With long faces the hair should be kept flat on the top of the head, and allowed to be visible at the sides; more especially should this be seen when the forehead is narrow. High foreheads should be veiled with curls or fringes. Round faces need a visible edifice of hair upon the top of the head. Long necks, however, forbid this arrangement, requiring some capillary furniture at the back. The catogan or "queue" style suits them best. This may occasionally be combined with a few high curls in front, but the effect of over-elaboration and of too great a weight of hair must always be carefully avoided.

The best and most artistic styles of hairdressing are those which show the shape of the head under the arrangement of the hair. The classic knot at the back looks well when the features are regular and the head finely formed, but not unless.

The fringe should never entirely conceal the forehead, unless the dimensions of the latter are enormous. But in ordinary circumstances the fringe should be restrained from undue length and thickness, and should always be lifted in one part to show the brow.

When the hair grows far back behind the ears and over the temples, it should be arranged in such a way as to make it approach the cheeks and brow as far as possible.

A coiffure that admits of some hair being visible below the ears, from a front view has a wonderfully softening effect upon the features. If the ears are not well-shaped the hair should be arranged over them, but not otherwise, as dainty ears are a beauty and should not be hidden.

Excessive use of hot curling-tongs is injurious to the hair, rendering it dry and brittle. Once a week is as often as the tongs may be used with impunity. Curling pins are not calculated to injure the hair, even if used every night.

Some people lose their hair, or at least render it scanty, by dragging it so tightly into ways that nature has

ordained it cannot go. The natural growth of the hair is to hang in tresses from the crown of the head, falling like a mantle over the back and like a veil over the face. Hence the best way to wear the hair is parted in the middle, as then it does not undergo such a strain as when dragged up from the face. Also the arrangement of back hair at the nape of the neck, instead of on the crown of the head, is far better for its health and growth.

Never pin up the hair tightly; always kept at tension, the sap cannot circulate properly.

Always use good hairpins; those that are rough destroy the hair.

Useful Recipes.—For falling hair and greyness take an ounce each of hartshorn, chloroform, and sweet almond oil, added to fifteen ounces of spirits of rosemary. Rub well into the head, after a good brushing.

For dry hair take half an ounce of spirits of rosemary, the same of spirits of camphor, and half that of glycerine, the juice of a lemon; shake all well together, then add four ounces of strong whisky. Apply this every night, alternating with a pomade composed thus: Two ounces prepared lard, two drachms white wax; melt these gradually, then add four drachms of balsam of tolu, twenty drops of oil of rosemary, and two drachms of tincture of cantharides. The balsam of tolu must be dissolved in half an ounce of rectified spirits of wine for twelve hours.

For damp or moist hair use the following: Bay rum, 2 oz.; oil of cloves, 10 drops; spirits of lavender, 4 oz.; spirits of thyme, 2 oz.; ether, $\frac{1}{2}$ oz. This lotion must be used in small quantities only.

A wash which makes the hair at the same time dry and fluffy consists of eau-de-Cologne, 1 oz.; rectified spirits of wine, 2 oz.; powdered bicarbonate of soda, $\frac{1}{2}$ oz.; water, 6 oz. Rub well into the scalp.

Superfluous Hairs.—Superfluous hairs, on the face or arms, are a cause of annoyance to many women. Most depilatories, however, are dangerous and only beneficial for a time. Electrolysis is the only lasting remedy. In skilful hands the electric needle can

work wonders. Not only can it destroy the roots of hair, but it can also obliterate, or, at any rate, greatly mitigate, unsightly scars, moles, warts, or other marks. Operations of this sort, however, are costly, and should only be performed by a very skilled expert.

THE TEETH

Unless there is some constitutional disease which causes teeth to decay prematurely, or makes them turn yellow or discoloured, there is no reason why every one may not possess white and sound teeth.

Neglect is the most serious enemy with which the teeth have to contend, and if boys and girls would only understand how much they will regret their carelessness in after years, they would cleanse them with the utmost assiduity and precision. Besides the unsightliness occasioned by decayed or broken teeth, there is the danger to health which ensues from the inability to masticate one's food thoroughly, in which case this, instead of giving nourishment, has exactly the opposite effect. The one essential towards keeping teeth healthy is the strictest attention to cleanliness. They should be washed after every meal, and inside as thoroughly as outside, as the largest amount of that arch enemy, tartar, is deposited on the former. But if there is one time in the day in which it is imperative to wash the teeth more thoroughly than at any other, it is before retiring to bed. During the night the acids generated by the food which has not been removed do their deadly work, and cause the enamel, or outer case, to decay. Strict attention to dental ablutions is also a great preventive of toothache. It is a great mistake not to have decayed teeth removed as soon as possible, as they are the chief causes of malodorous breath, neuralgia, and headaches. If long neglected they may become dangerous to the health, and abscesses forming beneath them often necessitate a serious operation.

A tincture that restores soundness to the gums is one ounce of coarsely-powdered Peruvian bark, steeped for a fortnight in half a pint of brandy.

The mouth should be well washed night and morning with this mixture, diluted in an equal quantity of rose-water.

There is often a formation of tartar upon the teeth. For removing this incrustation muriatic acid, or spirit of salt, is a very good thing. This preparation, however, should only be used *when necessary* and with great care. The method of using is this : Procure a clean skewer, one of those used by butchers, hammer or batter out the sharp point of it into a very small brush, not larger than one of the small sable brushes used in miniature painting. Dip this into the muriatic acid, allowing all superfluous acid to drain off, and rub the part of the tooth to be purified. There are very few incrustations which will resist this treatment. Care should be taken that, so soon as the operation is finished, all lingering traces of the acid be well removed from the mouth with chalk and water; afterwards with water alone. For some time after the operation just described has been performed the teeth will feel rough, will "be set on edge," which is a sufficient indication of the destruction which must result from habitual recourse to the process. Camphorated chalk is a safe dentifrice, and gives a delightful sensation of purity to the mouth. A very pleasant dentifrice is made with an ounce of finely-powdered green sage, mixed in a tablespoonful of white honey. A preparation for decaying teeth is composed of two scruples of finely-powdered myrrh, a scruple of juniper gum, and ten grains of rock alum, mixed in honey.

In childhood the teeth should be most carefully attended to. When the second teeth are coming they should be watched so that, on the first appearance of a tendency to irregularity, the child should be taken to a clever dentist. In fact, all through life periodical visits should be made to the dentist for purposes of prevention, which is so much superior to cure, and so much less disagreeable where the teeth are concerned. The skilled eye of a dentist soon perceives something wrong, and as quickly sets it right.

To artificial teeth no one can make

any objection, so important are they to the general health when the natural teeth have fallen out. When these become necessary, the greatest care should be taken to find out a really reliable dentist. When worn, artificial teeth must be kept scrupulously clean.

The bristles of a toothbrush should be neither very stiff nor in the least limp. To brush the teeth with limp bristles is merely to throw away one's time. But yet *too stiff* a brush is apt to injure the gums, makes them tender and causes them to bleed. The motion of cleaning the teeth should be up and down as well as across, for the chief aim of brushing is to rid the teeth of any morsels of food that stick between them after meals.

THE LIPS

The state of the lips often indicates the condition of one's health, becoming cracked, dry, and bloodless when this is not as it should be. In this case there is only one remedy, and that is to attend to one's diet, and endeavour to repair the damage caused by indisposition. Chapped lips are also sometimes caused by eating too many sweets. Too much tea spoils the redness of the lips, often turning it to a rusty brown. A little cold cream, applied at night, will relieve the disagreeable "stretched" feeling of chapped lips; but for permanent cure the dietary must be overhauled. A feverish condition produces dry lips, and this is often set up by eating things that disagree with us. Tincture of catecher or benjamin lightly pencilled on the cracks will also give relief.

Colouring for the lips consists of cold cream with a larger quantity of wax than usual in it, together with a few drachms of carmine. For vermilion tint a strong infusion of alkanet is preferable to the poisonous red lead. The chippings should be kept a week in the almond oil of which the cold cream is made, and incorporated afterwards with wax and spermaceti. Alkanet should always be tied in muslin when used for colouring purposes.

THE BREATH

The loveliest mouth that ever smiled would cease to be agreeable if the

breath were not pure and sweet, as it should be in health. If not caused by disease, the remedy for a malodorous breath is very simple. The teeth should be brushed after every meal; sweets only eaten in moderation, and onions and radishes never. If, notwithstanding these precautions, the breath continues to be disagreeable, a stick of the best liquorice should be broken into small pieces and kept in a box on the toilet table, a piece being put into the mouth after using the toothbrush. Liquorice has no smell in itself, and is for that reason preferable to the preparations of spice sold for the same purpose.

THE EARS

The internal cavities of the ears require to be daily washed with soap and water and carefully dried; it is said that bathing the backs of the ears with cold water contributes to preserve the teeth. Internally it is necessary to remove the cerumen when it becomes too copious, as, if suffered to indurate, it causes uneasiness, deafness, and even disease. Some persons employ a small syringe for this purpose, charged with soap and water, to which may be added a few drops of balsam of tolu; but this is seldom necessary, and, from the importance and sensibility of the organ, should not be used without extreme circumspection. The corner of a fine towel rolled up to a nice point, and dipped in tepid soapy water, will sufficiently cleanse the passage and remove the superfluous wax in ordinary cases. It must not be forgotten that the wax is an especial provision of nature for the purpose of assisting the ear in the admission of sounds, and while its intense bitterness affords an effectual repellant to the approach of insects, it has also other uses.

Picking the ear, besides being disagreeable and vulgar, is a most pernicious habit, and has been ascertained to be the cause of several severe afflictions.

THE EYES

The toilet of the eyes, when in perfect health, is extremely limited and brief, consisting simply of ablutions.

For this purpose rosewater, milk and water, and spring water may be employed as a matter of choice. When the eyes are very weary from long watching by a sick bed, or a tiring, dusty journey, or any other cause, a little cold tea makes an excellent wash for them.

No warm or even tepid wash should ever be applied to the eyes just before going out, as this renders them very susceptible to cold. Cold spring water is the best ordinary wash for the eyes. It should be flirited up at them (they being closed) with the fingers, or sprayed upon the lids in some other way, great care being taken to dab the eyes perfectly dry with a soft cloth.

If the eyes are tired and burn, rest them, and bathe them in the following wash: To a quart of soft, boiled water add a tablespoonful of the best brandy and a teaspoonful of salt. Have the bedroom perfectly dark and do not place the bed in such a position that the early morning sunlight will shine in the eyes.

An excellent wash for red, tired eyelids is composed of one pennyworth of sulphate of zinc dissolved in a quart of water. The eyes should be bathed in a little of this twice daily, and gently dried with a soft rag. This wash will often cure obstinate cases of weak eyes.

When anything gets into the eyes and the pain becomes excessive, it is advisable to go at once to a chemist or doctor. Even if the intrusive object cannot be extracted, the smarting may be dulled by a soothing application.

Eyebrows and Lashes.—Brushing the eyebrows and eyelashes every morning with a solution of green tea improves them.

If the brows are thin and ill-formed rub pure grease or vaseline on them at night, bathing them carefully in cold water in the morning, and then putting on a little petroleum. Never brush or rub the brows the wrong way. Brush them daily with a small eyebrow brush that can be got at any good chemist's, but do not get into the habit of "rubbing"; it will roughen and break the hairs.

A few drops of hazeline in water is

an excellent lotion for the eyelashes. They should be bathed in it every morning. A little powdered borax in water is also good, or even a still smaller quantity of carbonate of soda.

Children should be taught not to rub the eyes, for this is most injurious to these sensitive organs. If a child has perfectly strong, healthy eyes, the lashes may be improved by occasionally slightly trimming them; but this practice should be discontinued as one reaches maturer years, or no eyelashes will be the consequence.

THE NOSE

A red nose is generally caused by tight-lacing or indigestion. The kind of indigestion which makes the nose red is usually the sort of malady that is induced by over-eating or indulging in rich dishes with a variety of elaborate sauces. A red nose may, however, mean none of these things, and the individual who is perfectly temperate in eating and drinking and who never tightens her waist is sometimes afflicted with redness of the nose. In this case all that can be done is to bathe it with one of the cooling lotions recommended in the article on "Complexion."

It is quite useless to try to alter the shape of the nose. If Nature has been unkind in this matter, resignation must be practised. But we can usually control the colour; and after all a shapeless little nose, if it only is white and smooth, is better than a pure Greek outline and redness therewith.

THE HANDS

One of the most distinguishing marks between the refined and unrefined is the condition of the hands and finger nails.

The hands of growing girls are often red and clumsy, and girls who are beginning to take thought of their appearance are sometimes in despair about them, not being aware that they will grow whiter and whiter with every year.

The appearance of white spots on the nails is caused by knocks or blows. To obviate the appearance of such spots the hands must be taken care of and

the nails disturbed as little as possible. When the nails become stained or discoloured, a little lemon-juice is the best agent to employ as a corrective. It is equally valuable in discoloration of the skin. The care of the nails should be strictly limited to the use of the knife or scissors to their free border, and of the ivory presser to their base, to prevent the adhesion of the free margin of the scarf-skin to the surface of the nail, and its forward growth upon it. This edge of scarf-skin should never be pared, the surface of the nail never scraped, nor should the nails be cleaned with any instrument whatever except the nail-brush. There is no rule for the management of the nail of greater importance than that which prescribes the pressing back of the free edge of the scarf-skin, which forms the boundary of the base of the nail. This margin is naturally adherent to the surface of the nail, and has a tendency to grow forward with it, and become ragged and attenuated. *When allowed to do so, the ragged edge is apt to split up into shreds, and these, projecting from the surface, are pulled and torn, and often occasion a laceration of the skin and a painful wound. The occurrence of these little shreds may be effectually prevented by the regular use of the presser once or twice a week. It must be used with gentleness. The nails should be daily filed, but seldom cut. The ideal finger nail is just long enough to protect the top of the finger.

The following is an excellent preparation for making the hands white. Take as much scraped horseradish as will fill a tablespoon and pour upon it half a pint of hot milk. Use this before washing, allowing it to dry on the hands before applying the water. Redness and chapping are sometimes caused by the hands being imperfectly dried. The greatest care should be taken in drying them, more especially in cold weather.

If the hands become rough from any cause, the following may be applied with good effect. Half fill a basin with fine sand and soapsuds as hot as can be borne. Brush and rub the hands thoroughly with the hot sand. The best is flint sand, or the powdered quartz sold for filters. It may be

used repeatedly by pouring the water away and adding fresh. Rinse the hands in a warm lather of fine soap, then in clean cold water. While they are still wet, put into the palm of each a very small piece of almond cream, and rub it all over them. This again forms a strong lather. After drying the hands, rub them in dry bran or powdered starch till every atom of moisture is absorbed, and finish by dusting off the bran or starch. This will make the hands very soft and smooth. A slice of raw potato rubbed well into them will remove stains from the fingers and hands. Lemon-juice is also effective in this way, and if not used immoderately, may be applied without fear of evil consequences.

For chapped hands the following will be found efficacious. Equal quantities of white wax and sweet oil; dissolve in these a small piece of camphor, put it in a jam jar and stand it upon the hob till melted. It must be kept closely covered, and should be applied to the hands after washing and previous to drying them. A few drops of glycerine poured into the palms of the hands after washing, and rubbed all over them before drying is a simpler remedy for chapping.

The owner of the "moist hand" should never offer it ungloved if he or she can possibly avoid doing so.

The removal of this inconvenience is a problem of much difficulty, since checking the perspiration may very often be of serious injury to the health. There are occasions when a lady has to shake hands, and when she cannot always have gloves, but if her hand is of the perspiring kind, she should only give the tips of her fingers. Better to be suspected of a want of cordiality than to inflict upon your friends the disagreeable "empressement" of a damp hand.

THE FEET.

There are few women—or, indeed, men either—who do not suffer in one way or another from discomforts and ailments of the feet; and yet, until the pain becomes almost unbearable, no attention whatever is paid to them. This is a strange fact, for it seems to me that considering the large amount of

wear and tear they endure, the feet really require more care than almost any other part of the body. It is a great mistake to neglect them to the extent it is frequently done, and in the long run, the omission will be regretted, as a plentiful crop of corns, bunions, enlarged joints, and all the other ills that the feet are heir to, will rise up in judgment against us.

No one can possibly be either healthy or well, who does not keep his, or her, feet scrupulously clean. It is not too often to wash them every night before retiring to rest. The water should not be very hot as this has a weakening tendency. Cold water is invigorating, but the chill should be taken off for winter use. Once a week the foot-bath should consist of hot water and a good lather of soap should be made. The foot ought to be rubbed with a ball of sandstones and afterwards dried with plenty of friction.

There is nothing that so soothes sore, tired, aching feet as immersion in warm water, and they are much strengthened if a little sea salt is added to it. Toe nails must never be cut in the same manner as those of the fingers. Instead of being trimmed down at the sides they must be done *straight* across, otherwise the flesh will grow over them, and, at last, bury the nails altogether. In every other way the nails should be cleaned and treated as given in directions for care of the finger nails.

Corns and Bunions.—See pp 155-7.

Ingrowing Nails.—There is nothing so painful as ingrowing nails, and there have been instances in which operations of a serious nature have been necessary to extract them from the flesh, owing to this having been treated as of no consequence in the early stage. They are usually caused by pressure from boots, which have arrested their growth and forced them downwards into the flesh, instead of allowing them to grow naturally. At the first sign of this, place a tiny piece of cotton-wool in between the nail and the flesh of the toe, and allow it to remain there until the nail resumes its natural position; but on no account put off having medical advice should the nail not yield to this simple remedy.

Damp Feet.—A very common, and, at the same time, exceedingly disagreeable and uncomfortable ailment, is what is usually termed "damp feet." These primarily indicate a general want of tone, and in some cases, want of care. The ailment is very difficult to cure, but the following hints may be of use to any one suffering from it. Improve the health by taking a course of iron or some other tonic, and keep the feet clean by washing them three or four times a day in water, to which a little salt or alum has been added. Powder the inside of the stockings with a mixture of oxide of zinc and a little starch, and if the perspiration still continues, and refuses to decrease by the above usage, rub the foot lightly every night for a fortnight with belladonna liniment. If this should fail, then go at once to a doctor for advice.

THE ARMS, NECK, AND SHOULDERS

The roundest arms in the world fail to be beautiful if they are red, or rough. The best remedy for red and rough arms is to wash them with a fine lather of soap at least twice a day, and to dry them thoroughly and rub them vigorously. This treatment brings the pores into action, and induces a healthy condition of the skin, which disfavours specks and redness. Rubbing with a soft chamois leather is excellent for the skin, giving it both smoothness and gloss. The arms and shoulders are greatly improved by being rubbed in this way, but the chamois must be very soft, or it will break the skin instead of polishing it.

Enamels are but sorry substitutes for natural gloss of the skin. They give a hard, *baked* look and are simply destructive to what they assume to adorn, ruining the skin by filling up the pores. The use of violet powder may be condoned when it modifies the contrast between red arms and white evening dresses. The application being only temporary, it can only very slightly affect the well-being of the pores; but it should be very carefully used, or it will be likely to come off on the coat-sleeves of the partners of the red-armed one.

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Massage is very good for thin necks,

and oil of almonds and almonds themselves are excellent for rubbing in the skin. The former is a splendid substitute for cold-cream, and the latter crushed may be used instead of soap. A few drops of benzoin added to water and used as a lotion will keep the skin soft and prevent wrinkles prematurely appearing.

THE FIGURE

Thousands of women believe that a waist can never be too small, even for the largest and tallest figure. Proportion is wholly lost sight of in the endeavour to squeeze in the portion of the frame, though success is occasionally rewarded with a terrible bulging of superfluous flesh above and below the waist line. Even at the best, a girlishly slender waist goes badly with a mature figure.

In any circumstances, improvement to the figure will result from gymnastic and calisthenic exercises, from rowing, drilling, and swimming. But it is absolutely necessary that the patient should be mindful constantly of her own bearing. She must hold her shoulders back, her head up (not her chin up), and her chest forward. Every girl who appreciates the value of a good figure and a graceful carriage of the arms should assiduously practice such exercises as moving the arms in a free circle from the shoulders, and should not be satisfied until she can get her shoulders into such a state of suppleness that she can touch together the backs of her hands behind her waist without rotating her arms inwards. (Rotation of the right arm or hand inwards is in the opposite direction to that taken by the hand in screwing in a gimlet or corkscrew.)

Stoutness.—Even the prettiest face loses some of its attraction when it is accompanied by a heavy, bulky figure, fat out of all proportion to the head and face. This very ugly extreme is sometimes caused by ill-health, sometimes by a too sedentary life, and sometimes by self-indulgence. It is best avoided by abstaining from eating more than is necessary and never drinking until a full hour after a meal. There are numerous "cures" for overdevelopment of flesh, and thousands of

persons have reduced their bulk by following one or other of these. But, in making haste to be slender, many a woman has sacrificed, most unintentionally, the prettiness of her face. Loss of good looks is a high price to pay for a slightness of figure which may, after all, be entirely disproportionate to one's age and circumstances.

There is a means of keeping flesh on the face while dieting it away from the body, but it involves the daily use of a quantity of cold cream or other fatty mixture, and this is sure to tell, in other ways, against good looks. A greasy, shiny skin is not at all desirable, yet this is what too much cold cream produces in many.

The following advice for those who wish to decrease their weight has at least the merit of moderation: Eat lean meat (no fat), poultry, game and fish, toast, eggs, crust of bread, green vegetables, and salads without oil. Drink tea and coffee, with saccharine instead of sugar, and very little milk—no cream. No drink at lunch or dinner—but an hour after, lemonade, lime-juice, raspberry syrup, and other acid drinks; as little as possible of any. No alcohol; no wine; no beer, and very little milk. Plenty of exercise and hill-climbing, walking, running, riding, cricket, tennis, golf, etc.

Thinness.—For thin persons the following diet will be found efficacious. Fat beef, mutton, pork, etc. Thick soups with rice, tapioca, barley or bread in them. Plenty of good sweets—plenty of sugar in puddings—pastry, bread, butter, milk-puddings, sweet jellies, custards, creams, and all kinds of vegetables. Drink tea, coffee, cocoa, chocolate, and milk. Thin persons may drink at meals; in fact, should make a practice of doing so. They should avoid pickles, acids of every kind (including some wines), lemons, lemonade, salt meat, and salt fish. This generous diet gives much occupation to the digestive organs, and if they are not healthy it will do more harm than good. No thin woman can afford to lose her temper. Nothing so immediately induces scragginess.

One should sleep not merely six or eight hours a night, but until one awakes refreshed. The time will vary

with different women. Sleep restores the nervous power more than any other part of the system, and those who make the greatest drain on their nervous forces need the most sleep.

SHAVING

A smooth shaven beard is a mark of cleanliness and refinement in a man. A clean shave is also a luxury, and in order to obtain it the first requisites are a good razor and a steady hand. The usual and best method is to lather the face well with good soap and hot water, and then rub it firmly and constantly with the fingers for a few minutes previous to the operation; this softens the beard, thereby disposing it to yield with facility to the edge of the razor. If shaving liquid or paste is used instead of soap, the same mode of procedure may be adopted.

An essential rule as regards this branch of a man's toilet is to have the razors always in perfect order. This is attained in the first place by invariably purchasing razors of the best makers, as their being properly tempered ensures comfort in using them. Secondly, by using a succession of razors; any steel edge cuts better for having been in use and then laid aside for a short time. Especial care should be taken that each razor is perfectly dry, well stropped immediately after use, and secured from the air by being wrapped up in a piece of wash leather previous to its being put away. After having used the strop, strop the razor for a few seconds on the fleshy part of the hand before shaving.

A soft linen rag should be used to cleanse the razor from the lather, etc., as paper, which is commonly employed for this purpose, is liable to scratch its surface, and dull its edge.

Always put away the shaving brush full of lather; this practice ensures its flexibility.

When choosing a razor be guided by the nature of your beard; a soft, thin one requires a thin elastic edge; a stiff, thick beard demands a heavier razor, with a firm edge, and but slightly elastic.

In shaving, hold the razor flat on the face, draw it in a sloping direction, and hold the skin as tight and straight

as possible, so as to throw the beard out fully. It is perhaps best to complete one side with the razor before commencing the other.

Alum, bay-rum, or an alum block, composed of alum and glycerine, applied after shaving, will relieve any irritation. For cuts rub alum well in; if severe, plug with boracic acid.

THE MOUSTACHE

When a man has finely cut lips, he should wear his moustache short. A well-cut mouth and chin should never be hidden. There are a few styles of face that are not improved by a moustache, though in some cases a clean shave is more becoming.

In order to draw the moustache to a fine point at the ends, cosmetic or wax can be used.

HAIRDRESSING FOR MEN

Fashion sanctions varying modes of wearing the hair, but a man should

carefully avoid all fantastic dressing, and entire neatness should be his chief aim. Careful brushing, with occasional ablutions, will best preserve the hair, and perhaps the use also of such pomades as are most delicately scented.

Simple as the style of men's coiffure is, hardly any two men do their hair exactly alike. One would imagine that, owing to the extreme shortness to which it is generally cut, there would scarcely be any opportunity to dissimilarities; but the fact remains that, even leaving out the difference of parting it at the side or down the middle, one man will sweep it straight off the forehead; another will brush it over the brow till it falls almost like a fringe. A third allows his hair to fall about in various directions, while, on the head of a fourth, all the lines of the hair run in the same direction. It must be left to the individual to choose which style suits him best.

TRUSSING

THE trussing of poultry and game may be said to be one of the most important arts in connexion with cookery. Realizing the importance of this branch of the cook's art, and knowing how difficult it is to learn from written instructions, we have prepared a series of illustrations to practically show the various stages in the preparation of game and poultry for different modes of cooking. To obtain these and to ensure their being reliable guides for the uninitiated, we secured the services of a very experienced trusser. The latter, taking each bird or animal in turn, demonstrated the manner of drawing, trussing, etc., at each stage of which a photograph was taken, so that by studying these the amateur will be able to acquire the proper method. Skewers are not now used for trussing fowls and similar small birds, which are always trussed with a needle and twine. This mode not only facilitates the carving, but avoids serving a dish rendered unsightly by skewers or skewer holes. Trussing needles, made of iron, are obtainable from any ironmonger. They

are very similar to packing needles—strong and straight, about 9 inches long.

TO PLUCK A BIRD

Hold the bird in the left hand, and commence to pull off the feathers from under the wing. Having plucked one side, take the other wing and proceed in the same manner until all the feathers are removed.

Poultry feeders usually pluck birds immediately after killing, because the feathers are more easily withdrawn before the flesh stiffens. Another way is to plunge the bird into hot, but not boiling, water for about one minute, and immediately pull out the feathers. But this is a rather risky method, for if the bird be left too long in the water, the skin becomes tender, apt to be easily torn, and the appearance is thus spoiled.

TO SINGE POULTRY

Hold the bird by the neck with the left hand, and with the right hand singe off the down with a lighted paper, moving it quickly so as not to scorch

the bird; those parts that will be hidden after the bird is trussed must be most carefully gone over, but it is usual to again singe after trussing.

It is useless to expect singeing to take away the feathers that have been left in through careless plucking; if any should appear, they must be pulled out, not singed off, otherwise they will impart a disagreeable odour of burnt feathers to the bird.

TO BONE POULTRY AND GAME

Birds are invariably plucked and singed before boning, but not drawn. The crop, however, should be removed, the wings and legs cut off at the first joint, and the tendons of the legs carefully drawn at the same time. To bone the bird, use a small sharp knife, and first remove the merry-thought at the neck—a very simple matter. This done, cut the skin down the centre of the back and raise the fle: carefully on either side, sever the wing joints, and continue to detach the flesh, keeping the blade of the knife close to the bone. When the legs are reached dislocate the joints, cut the connecting tendons, but leave both wings and legs intact until the breast and back bones have been removed, together with the viscera. Turn the body completely inside out; take the thigh bones of one of the legs in the left hand and strip the flesh downwards. Repeat this until all the small bones are removed. The bird may then be turned right side out again, when it will be found completely boned and should be quite whole.

Both large and small birds may be boned in this way. They are then stuffed, re-shaped and trussed, or rolled into galantines.

TO DRAW POULTRY

In order to draw a bird properly, it is well to know where to find the different parts of the inside.

Lay the bird back downwards upon the table, and cut off the ends of the pinions. Then turn the bird breast downwards, and cut a long slit in the back of the neck, in the manner shown in Trussing Illustration No. 1, Fig. 1; pass the knife under the skin, cut off the neck at its junction with the body, taking care not to cut through the

under skin of the neck in this motion. Then cut through the skin of the back of the neck at the place where the first incision was made, and through the underneath skin about three inches from the breast, leaving the two flaps of neck skin to fold over the jagged opening (see Figs. 2 and 3), and draw out the neck. Then take out the crop, and well loosen the entrails by placing the forefinger inside the body, and working it round from left to right (see Fig. 4). Put the fowl on the table tail upwards and make a deep cut straight across the body between the tail and the vent. The vent can then be easily cut out, and the opening will be found sufficiently large to enable the fingers to be put inside the bird to take hold of the gizzard, etc. (see Fig. 5), and if the loosening at the other end has been properly performed, the whole of the inside of the fowl can be easily drawn away in one mass. Care should be taken not to draw away the fat on gizzard. This can be felt with the fingers and may be easily left inside the bird.

Be very careful not to break the gall-bladder, for this accident may ruin the bird by imparting a very bitter taste to the flesh. Now wipe out the inside with a clean cloth, but do not wash the bird, unless any part of the inside has been broken, in drawing; dip the legs of the bird in boiling water scrape them, and cut off the claws.

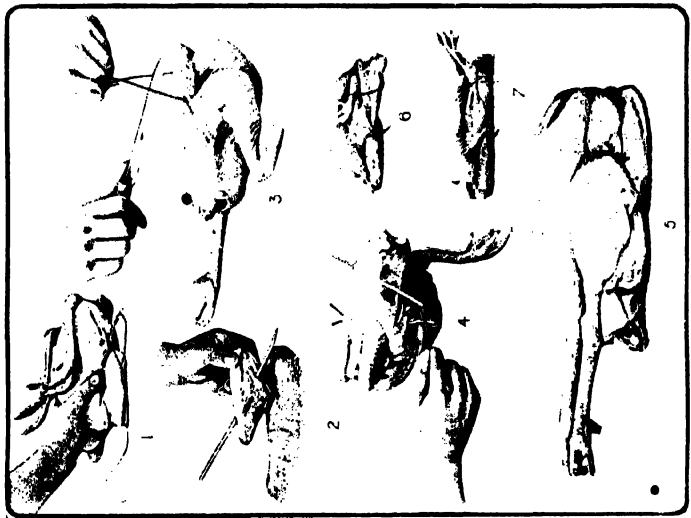
FOWL FOR ROASTING

Place the fowl upon the table (see Trussing Illustration No. 2, Fig. 1), and pass the needle and string through the centre of the fowl, just above the thigh-bone, exactly in the centre of the two joints (see Fig. 1), leaving the end of the string protruding from the place where the needle entered the bird. Turn the fowl over on to its breast, and carrying the twine on, pass it in a slanting direction between the two centre bones of the wing, catching the underneath part of the pinion (see Fig. 2), and then over the bird through the pinion and then the wing of the other side, and the string will come out near the point where it first entered the fowl; then tie the two ends together, but not too tightly or the bird will not

No. 1.



No. 2.



TRUSSING.

No. 3.



TRUSSING.

No. 4.



lie flat on the dish (Fig. 3). Next take the fowl in the left hand, breast downwards, and pass the needle and twine through the back, close to the end of the thigh-bones (Fig. 4); put the legs into position shown, turn the fowl on its back, and carry the string over the leg and then through the breast, catching up a small portion of the bone as the needle passes through. Take the string on over the other leg and tie the ends together, and the bird will be ready for roasting (see Fig. 5).

Now again since the bird, going over it very carefully, so that no feathers remain; then, after cleaning and washing the gizzard and liver, put one in each of the pinions.

FOWL FOR BOILING

It is generally found more difficult for a beginner to truss a fowl for boiling than for roasting, for in loosening the skin and drawing it over the bone it is very easy to tear it.

Loosen the skin of the leg by placing the two first fingers of the hand inside the body, and working round the leg as shown in Trussing Illustration No. 3, Fig. 1. Make a cut in the drumstick of the fowl, about half an inch from the hock (Fig. 2), to prevent the bone from breaking under the next operation. Turn the shank inward on to the back of the fowl (Fig. 3), and draw the skin of the leg over the hock, tucking the joint into the body (as in Fig. 4). Next cut off the shank about half an inch above the foot, i.e., cutting off all the leg and foot that shows in Fig. 4. Sew with needle and string as for roasted fowl (see Fig. 5).

TO TRUSS A TURKEY

Turkeys are plucked and singed in exactly the same manner as fowls, but before trussing draw the sinews. To do this, break the leg bones close to the feet, run them on a hook placed in the wall (above you, so that weight as well as strength can be brought to bear), and draw out the sinews as shown in Trussing Illustration No. 4, Fig. 1. This is sometimes rather a hard task, but it must be done or the legs will be uneatable. Next cut off the neck close to the back as directed

in previous paragraph, leaving enough skin to turn over it, and loosen the liver and the rest of the inside at the throat end. Cut off the vent, take out the gut and draw the bird with a hook sold for this purpose. Take great care not to break the gut joining the gizzard, for fear of grit, or the gall bladder, which, if broken, would make the flesh bitter.

Next dry the inside thoroughly. Cut the breastbone through at each side close to the back, beat it flat with a wooden rolling-pin, then place the pinions as shown in illustration, and skewer (Figs. 2 and 3).

Press the legs close to the body and skewer at first and second joints, and the turkey will now be ready for stuffing.

Having filled the bird with the forcemeat (the fuller the better and neater it will look), skewer over the flap of skin, also that at the neck.

Turn the bird back uppermost and put a string across and across as shown, except in the case of a very small turkey, when it will not be required.

TO SKIN AND TRUSS A HARE

Cut off the fore and hind legs at the first joint, make a long slit in the skin underneath the body, detach it from the flesh, and draw it over the hind legs, leaving the tail on. Next draw the skin over the back and slip out the fore legs, easing it with a knife, if necessary, over the neck and head, and being very careful not to injure the ears, which are left on. To hang the hare on a hook is a most convenient way of accomplishing the skinning. Slit the body in the same direction as the skin was cut, remove all the viscera except the kidneys, and wipe the inside with a clean, damp cloth. Next cut the sinews beneath the hind legs and press them towards the head, and bring the fore-legs backwards to the hind ones. A skewer can then be passed through the two legs on one side, through the body and the two legs on the other side, the chief part of the trussing being thus effected by means of one skewer. Press back the head, pass a skewer through the top of the shoulder, the back of the neck, and out through the top of the opposite shoulder.

WASHING, IRONING, ETC.

WASHING

This labour should commence on Monday morning by a careful examination of all dirty articles. Then enter them in the washing-book, separating the white linen and collars, sheets and body-linen into one heap, fine muslins into another, coloured cotton and linen fabrics into a third, woollens into a fourth, and the coarser kitchen and other greasy cloths into a fifth. Every article should be examined for ink or grease spots, or for fruit or wine-stains.

Soaking.—The sheets and fine linen should be placed in a tub and just covered with lukewarm water, in which a little soda has been dissolved and mixed, and left there to soak till the morning. The greasy cloths and dirtier things should be laid to soak in another tub, in a liquor composed of $\frac{1}{2}$ lb. of unslaked lime to every 6 quarts of water which has been boiled for two hours, then left to settle, and strained off when clear. Each article should be rinsed in this liquor to wet it thoroughly, and left to soak till the morning, just covered by it when the things are pressed together. Coppers and boilers should be filled, and the fires laid ready to light.

Washing.—Early on the following morning the fires should be lighted, and, as soon as hot water can be procured, washing commenced; the sheets and body-linen should be taken first, each article being removed in succession from the lye in which it has been soaking, rinsed, rubbed, and wrung, and laid aside until the tub is empty, when the foul water is drawn off. The tub should be again filled with lukewarm water, about 80°, in which the articles should again be plunged, and each gone over carefully with soap, and rubbed. Experienced

washerwomen rub one linen surface against the other on a ribbed board, two parts being thus cleaned at once. After the first washing, the linen should be put into a second water, as hot as the hand can bear it, and again rubbed over in every part, examining every part for spots not yet removed, which require to be again soaped over and rubbed till thoroughly clean: then rinsed and wrung.

Boiling.—In order to remove every particle of soap, and produce a good colour, they should now be boiled for about an hour and a half, in the copper, in which soda, in the proportion of a teaspoonful to every two gallons of water, has been dissolved. Some very careful laundresses put the linen into a canvas bag to protect it from the scum and sides of the copper. When taken out it should again be rinsed, first in clean hot water, and then in an abundance of cold water, slightly tinged with blue, and again wrung dry, either by hand or by running through a mangle. It should now be removed from the washing-house and hung up to dry or spread out to bleach, if there are conveniences for it; and the earlier in the day this is done, the clearer and whiter will be the linen.

Coloured Articles require a milder treatment; any application of soda will discharge the colour, and soaking all night, even in pure water, deteriorates the more delicate tints. When ready for washing, if not too dirty, they should be put into cold water and washed very speedily, using the common yellow soap, which should be rinsed off immediately. One article should be washed at a time, and rinsed out immediately before any others are wetted. When washed thoroughly

they should be rinsed in succession, in soft water, in which common salt has been dissolved, in the proportion of a handful to three or four gallons, and afterwards wrung gently, as soon as rinsed, with as little twisting as possible, and then hung out to dry. Delicate-coloured articles should not be exposed to the sun, but dried in the shade, using clean lines and wooden pegs.

Woollen Articles are liable to shrink unless the flannel has been well shrunk before making up. This liability is increased where very hot water is used: cold water would thus be the best to wash woollens in; but as this would not remove the dirt, lukewarm water, about 85°, and yellow soap, are recommended. When thoroughly washed in this, they require a good deal of rinsing in cold water, to remove the soap. Greasy clothes, which have soaked all night in the liquid described, should be now washed out with soap-and-water as hot as the hands can bear, first in one water, and rinsed out in a second (soda will be needed in the water used), and afterwards boiled for two hours in water in which a little soda is dissolved. When taken out, they should be rinsed in cold water, and laid out or hung up to dry.

Silks and Stuffs.—Silk handkerchiefs, etc., require to be washed alone. When they contain snuff, they should be soaked by themselves in lukewarm water for two or three hours; they should be rinsed out and put to soak with the others in cold water for an hour or two; then washed in lukewarm water, being soaped as they are washed. If this does not remove all stains, they should be washed a second time in similar water, and when finished, rinsed in soft water in which a handful of common salt has been dissolved. In washing stuff or woollen dresses, the band at the waist and the lining at the bottom should be removed, and wherever it is gathered into folds; and, in furniture, the hems and gatherings. A black silk dress, if very dirty, must be washed; but, if only soiled, soaking for four-and-twenty hours will do; if old and rusty, a pint of common spirits should be mixed with

each gallon of water, which is an improvement under any circumstances. The operations should be concluded by rinsing the tubs, cleaning the coppers, scrubbing the floors of the washing-house, and restoring everything to order and cleanliness.

Washing Machines.—The use of machines for washing, wringing and mangling has now become general. They can be had suitable for the smallest as well as the largest family, and materially save labour, and in a short time, their cost. According to the machines used so do the instructions vary, each maker having some specialty. It may, however, be roughly stated that stains should be rubbed out of clothes before they are put into the machines, and that care should be taken in wringing the articles that the buttons be not dragged off. An ordinary family washing machine when opened out occupies a space of about from 4 ft. to 5 ft. square (not more room than tubs would take), but when not in use it can be greatly reduced. A wringing machine is sometimes attached to a washing one, and is occasionally a thing apart, which can be fixed to an ordinary tub. It may be said that it is of the greatest use if there is anything like heavy washing to be done, as with very little trouble the clothes are thoroughly wrung, and all the water being squeezed out, time in drying is thus saved. Wringing machines also serve for mangling ones.

MANGLING

Linen, cotton, and other fabrics, after being washed and dried, are made smooth and glossy by mangling and by ironing. The mangling process, which is simply passing them between rollers subjected to a very considerable pressure, produced by weight, is confined to sheets, towels, table linen, and similar articles which are without folds or plaits. Ironing is necessary to smooth body-linen, and made-up articles of delicate texture or gathered into folds.

STARCHING

This is a process by which stiffness is communicated to certain parts

of linen, as the collars and fronts of shirts, by dipping them in a paste made of starch boiled in water, mixed with a little borax, where extra stiffness and glossiness is required.

When the "things to be starched" are washed, dried, and taken off the lines, they should be dipped into the hot starch made as directed, squeezed out, and then just dipped into cold water, and immediately squeezed dry. If fine things be wrung, or roughly used, they are very liable to tear, so too much care cannot be exercised in this respect. If the article is lace, clap it between the hands a few times, which will assist to clear it; then have ready laid out on the table a large clean towel or cloth, shake out the starched things, lay them on the cloth, and roll it up tightly, and let it remain for three or four hours, when the things will be ready to iron.

IRONING

The irons consist of the common flat-iron, which is of different sizes, varying from 4 to 10 inches in length, triangular in form, and from $2\frac{1}{2}$ to $4\frac{1}{2}$ inches in width at the broad end; the oval iron, which is used for more delicate articles; and the box-iron, which is hollow, and heated by a red-hot iron inserted into the box. The Italian iron is a hollow tube, smooth on the outside and raised on a slender pedestal with $\frac{1}{2}$ footstalk. Into the hollow cylinder a red-hot iron is pushed, which heats it; and the smooth outside of the latter is used, on which articles such as frills and plaited articles are drawn. Crimping

and gauffering-machines are used for a kind of plaiting where much regularity is required.

To be able to iron properly requires much practice and experience. Strict cleanliness with all the ironing utensils must be observed, as, if this is not the case, not the most expert ironer will be able to make her things look clear and free from smears, etc. After wiping down her ironing table, the laundry-maid should place a coarse cloth on it, and over that the ironing-blanket, with her stand and iron-rubber; and having ascertained that her irons are quite clean and of the right heat, she proceeds with her work.

It is a good plan to try the heat of the iron on a coarse cloth or apron before ironing anything fine; there is then no danger of scorching. For ironing fine things, such as collars, cuffs, muslins, and laces, there is nothing so clean and nice to use as the box-iron, the bottom being bright, and never placed near the fire. It is always perfectly clean; it should, however, be kept in a dry place, for fear of its rusting. The skirts of muslin dresses should be ironed on a skirt-board covered with flannel, and the fronts of shirts on a smaller board, also covered with flannel, this board being placed between the back and front. After things are mangled, they should also be ironed in the folds and gathers; dinner-napkins smoothed over, as also table-cloths, pillow-cases, and sometimes sheets. The bands of flannel petticoats, and shoulder-straps to flannel waistcoats, must also undergo the same process.

WRITING, SPELLING, ETC.

SPELLING.

Rules of Spelling.—(1) Monosyllables ending in *f*, *l*, or *s*, preceded by single vowel, double the final consonant, as *buff*, *call*, *dress*. The following are exceptions: *if*, *of*, *ag gas*, *was*, *has*, *yes*, *is*, *his*, *this*, *us*, *thus*. (2) Monosyllables ending in any other consonant than *f*, *l*, or *s*, do not double the final letter, as *ban*, *can*, *fig*, *rap*. The following are exceptions: *add*, *odd*, *ebb*, *egg*, *inn*, *err*, *burr*, *purrr*, *butt*, *buzz*, *fuzz*. (3) Compound words generally follow the orthography of the primitive words of which they are composed.

Spelling of Derivative Words.—That part of a derivative word which is placed before the radical is called a prefix, as *return*, *intend*, *exchange*. That part of a derivative word which is placed after the radical is called a suffix, as *stormy*, *beautify*. (1) The final letter of a prefix is often omitted, as *co*-relative, for *con*-relative. (2) The final letter of a prefix is often changed to one which will harmonize in sound with the initial letter of the radical, as *of*-fend for *ob*-fend, *ac*-credit for *ad*-credit. (3) Monosyllables, and words accented on the last syllable ending in a consonant, double the final consonant if the radical ends with a single consonant preceded by a single vowel, as *digging* for *dig-ing*. (4) In words, ending in *e* silent, the final vowel of the radical is dropped on receiving a suffix beginning with a vowel, as *giving* for *give-ing*, *famous* for *fame-ous*. (5) Words ending in *y* preceded by a consonant generally change the *y* into *i* on receiving a suffix, as *happiest* for *happy-est*, *dutiful* for *duty-ful*.

Capital Letters.—Capital letters are used for the sake of distinction. The following words should begin with capitals: (1) The first word in every sentence; (2) The first word in every line of poetry; (3) Proper names, and adjectives derived from proper names; (4) The names of important events;

(5) The first word of a direct quotation. *I* and *O* should be written in capitals.

PUNCTUATION.

Punctuation, or the insertion of points in written language, is a very important matter, for the sense or meaning of words is greatly dependent on the points which are used along with the words. For instance, "You will be rich if you be industrious, in a few years," is a very different thing from, "You will be rich, if you be industrious in a few years."

There are four points: the *full-point*, or *period*; the *colon*; the *semi-colon*; the *comma*.

The *full-point* is a single dot, thus [.] and it is used at the end of every complete sentence; that is to say, at the end of every collection of words which makes a full and complete meaning, and is not necessarily connected with other collections of words.

The *colon*, which is written thus [:], is next to the full-point in requiring a complete sense of the words. It is almost equivalent to "therefore," and indicates that the following words draw a conclusion from the preceding statements, as, "He is weak, he is old: he will soon die."

The *semicolon* is written thus [;], and it is used to divide the clauses of sentences, in cases where the comma marks a subordinate division.

The *comma* is written thus [,], and is used to mark the shortest pauses in reading and the smallest divisions in writing. It also takes the place of the word "and," so avoiding repetition, as, "hat, boots and gloves," the conjunction being retained, and the comma omitted, before the last noun.

Besides these points there are certain grammatical signs or marks which are made use of in the writing of sentences: the mark of *parenthesis*, the mark of *interrogation*, the mark of

exclamation, the *apostrophe*, otherwise called the mark of elision, and the *hyphen*.

The mark of *parenthesis* consists of two curved strokes drawn across the line of writing or of print. Its use is to enclose a phrase thrown in hastily to assist in elucidating our subject, or to add force to our assertions or arguments. The parenthesis ought to be very sparingly used. The comma is frequently used to mark a parenthetical clause in a simple sentence.

The mark of *interrogation*, which is written thus [?], is used when a question is asked; as, Who has my pen? What man is that?

The *dash* [—] is sometimes employed instead of a colon in familiar writing, and frequently in place of the parenthesis.

The mark of exclamation or admiration is written thus [!] and, as its name denotes, is used to distinguish words or sentences that are exclamatory from such as are not: *What do you say!* *What do you say?*

The apostrophe, or mark of elision, is a comma placed above the line, thus [']. Elision means a *striking out*: and this mark is used for that purpose, as *don't* for do not; *tho'* for though; *lov'd* for loved. It is necessary in the marking of the possessive case of nouns.

The hyphen, or conjoiner, is a little line drawn to connect words or parts of words; as *in sea-fish*; *water-rat* for here are two distinct words, though they, in these instances, make but one. When, in writing or in printing, a line ends with part of a word, a hyphen is placed after that part, in order to show that that part is to be joined in the reading with that which begins the next line.

These are all the *grammatical* marks; but there are others, used in writing for the purpose of saving time and words. The mark of *quotation* or of *citing* may be mentioned. This mark consists of two commas placed thus: "There were many men."

This mark [¶] is found in the table. K stands for *paragraph*. This [§] is sometimes used instead of the word *section*. As to stars (*) and the other marks which are used for the purpose of leading the eye of the reader to notes,

in the same page, or at the end of the book, they follow in this order, * † § || ¶. Small letters above the line are also used. As a mark of abbreviation, the full-point is used, as, "Mr., Mrs."

HOW TO WRITE A LETTER

Address and Date.—In writing a letter, no matter whether upon business or for pleasure, one should *always insert address and date*. This may seem a trivial point, but it is very desirable. To date a letter "London, Saturday," or "Brighton, Wednesday," is no guide for the friend to whom the letter is sent. It may be that the correspondent knows the full address, and can reckon back, with the assistance of the post-mark, to the day the letter was written. But to render a letter complete, the address should be sufficient to enable the post-office to return it if the *addressee* be absent, while the date should include the year, the month, and the date of the month.

Poverty of invention and bad habits are exemplified in the beginnings and endings of letters. Many people commence their letters with some such sentence as "Just a line to say," or end them with some apology, such as "In frantic haste," or "In haste to catch the post." There is no need for such introductions and conclusions. It is no excuse to conclude "in frantic haste." Why should you have put off writing till the last moment? It is not very complimentary to the receiver of the letter, and not very "good form" on the part of the writer. A letter needs no introduction. Write what you have to say. Begin at once, if the subject be one of importance. If the letter is mere gossip, the commencement is immaterial. "I hope you are quite well, as this leaves me at present," is dreadfully illiterate. In short, say what you have to say as pleasantly, as directly, and as grammatically as possible, without vain excuses.

Write distinctly, and do not write across your letters.—"Crossing" is a habit with some people, and it is a bad habit for which there is no excuse.

Punctuation is an important but generally disregarded feature of correspondence. The relative value of the

"stops" should be learned, and the proper use of the hyphen, the inverted commas, and the parenthesis ought to be studied. Attention to these matters will render letter-reading a pleasure, and correctness in details need never degenerate into pedantry.

The formation of sentences deserves attention. No doubt a sentence spoken ungrammatically is as bad as one written ungrammatically, but the latter remains as evidence of ignorance, and is consequently the more regrettable. A little preliminary thought will prevent mistakes, and with a little practice rhythmical sentences will flow spontaneously from the pen.

Be natural, and do not strive after effect in your correspondence. Sentences, and turns of expression which do not come naturally, are as bad as the adopted style of some other and well-known writer. They are evident to the reader as forced. Say what you have to say in your own way, and while you are as light as possible do not be flippant; while serious, do not be profane in allusions. Such instances may, to the uneducated mind, pass for "wit," or even originality. They are always in bad taste, and frequently offend.

The frequent underlining of words is another blemish which should be avoided. Many ladies have a habit of underscoring their words. Such dashes are generally unnecessary. The reader will supply the emphasis. Occasionally an emphasis is necessary—"I am so *very* sorry," or some such sentence, may fitly be underlined—but the practice should be avoided.

The personal "yours" is often erroneously written with the apostrophe thus—"your's." Too many quotations, dashes, notes of exclamation, and such embellishments, are unnecessary.

In addressing gentlemen of any position, it is usual and courteous to write them *Esq.* (not *Esquire* in full), and never "*Mr.*" So-and-So. The non-observance of this rule betrays either rudeness or ignorance. It is better to err on the side of over-politeness than to run a risk of offending—as we have known people offended—by addressing correspondents as *Mr.*—

Come to the point.—Business letters, and, indeed, all letters, except those intentionally of a gossiping and purely amusing nature, should introduce the main topic as soon and as clearly as possible. The letters should not be long. A well-expressed and directly-worded note will convey the meaning much better than a lengthy epistle with parentheses, dashes, and side issues involved. Be concise, clear, and courteous.

Hurried writing in social communications is to be deprecated. A clean, cool, well-written letter, free from erasures and unsightly blots, implies consideration; and although there be some who can sit down and dash off a letter and say all they have to say clearly and well, such talent is not vouchsafed to the multitude. Therefore we say: (1) Weigh your words, particularly when writing to a person in whose discretion you have not implicit confidence, or to a gossip; and (2) Never exaggerate. To exaggerate is almost as bad as to write falsely; it conveys a poor opinion of the writer, and reflects upon the intelligence of the recipient of the letter. People who speak in superlatives, who have "hundreds of notes to reply to to-day," or who are "simply overwhelmed with engagements," whether business or social, may safely be written down as insincere.

Rude or impertinent letters should never be written, but if received from some other person should be ignored; if likely to be repeated, the letter may be returned to the writer.

Never say ill-natured things in a letter. Written words remain. A letter written in haste is frequently repented at leisure. Be silent if accused, or if silence is incompatible with honour, state facts and let them do their work; the addition of recriminations or sneers can do no good. It is better to turn away wrath by a soft answer than inflame it by bitterness. Special care should be taken in commenting on third persons. The repetition of ill-natured gossip about them, or the communication of facts to their discredit, even if the facts are true, may easily involve the writer in the complications of a libel action. Discretion

should be maintained, even when writing to intimate friends.

Never use postcards when applying for payment of a debt. Even when the debt is not disputed such method of application may lead to the creditor being cast in damages for libel.

Never assume in correspondence the pretence of being a Solicitor. To do so is an actionable offence.

Fold your letter up carefully. Do not crease it up to make it fit a small envelope. Use, rather, a large one, so that the sheet of paper may be unsoiled and smooth. Never omit to direct the envelope carefully and correctly; put the stamp on straight, right way up, in the upper-hand corner, and fasten the envelope firmly.

By a careful study of the foregoing hints we venture to think that any one may acquire some aptitude in the art of letter-writing, sufficient, at least, to give pleasure to those with whom they correspond, and to enable them to avoid some of the pitfalls which may ensnare the unwary.

PRACTICAL LETTER-WRITING

We may now proceed to the practical part of our subject—the actual writing of the letter. We may divide this into two portions—the social, and the business-like communication. The Social, as the more general, may come first.

Having provided ourselves with materials, and a pen, as desired by Sam Weller, "warranted not to splutter," we can essay our correspondence; and naturally will write first our own address in the upper right-hand corner, if the same be not stamped on the paper, as is now very frequently the case. In writing short notes, it is more polite to put the address at the bottom of the letter, on the first page, on the left-hand side, if inserted at all.

The address should be full and distinct for the reason given in the foregoing chapter; the date should likewise be added clearly, thus:

HEATHFIELD COTTAGE,
FARNHAM,

21st January, 19—.

The county in this case is not

material, for if there be only one Farnham, the distinguishing shire need not be added; but in the case of Richmond it would be necessary. When correspondents inhabit a large city, to add the county is superfluous. London or Manchester need no distinguishing. Of the two methods of dating letters, we prefer the date before the month, as this mode keeps the figures apart, and all confusion is thereby avoided.

The headings of business letters are usually printed. In America they are voluminous. The simpler and the neater the address the better. In business letters the address is given in full, and the postal district of the metropolis is added; for instance:

WARWICK HOUSE,
SALISBURY SQUARE,
LONDON, E.C.
—, 19—.

Suppose the address of the writer and the date have been legibly written in full. We will now proceed to the greeting or "salutation," which may vary considerably, and which does, in fact, show us the degree of intimacy and the personal feelings in which we are held by the writer. In communications between mere acquaintances the style varies from "Sir," the cold and formal, by degrees of warmth to the familiar "My dear So-and-So," or even the more colloquial "Dear old fellow." The formal "Sir" prepares us for something possibly unfriendly.

The forms "My Dear Sir," and "My Dear Mr. So-and-So" are the next steps leading up to "My Dear Jones," or "Smith," or whatever the name may be. "My dear" is generally regarded, and particularly when the communication is between a lady and gentleman, as savouring of a certain intimacy. The more usual form is "Dear Mr. — and Dear Miss —, or Mrs. —," as the case may be. The possessive is only employed amongst friends, or in cases wherein the writer wishes to emphasize the acquaintance-ship, or is desirous to continue it on a more familiar footing. In all ordinary cases the form "Dear Mr. or Mrs." is sufficient. Ladies, when addressing a business man, generally commence "Dear Sir," or "Gentlemen," if the

firm be included. "Dear Sirs" is also permissible in the latter case. The impersonal may, of course, be adopted in business communications or in social life, such as follows:

"Mrs. Jones presents her compliments to Mrs. Smith, and will feel obliged if she will be so good as to return the volume," etc.

Care must be taken in these cases that the relative positions of the writer and recipient be not altered, for the pronouns are apt to get mixed in inexperienced hands, and it is difficult to know which lady is indicated by "her" and by "she." The third person must be used all through the letter.

But frequently such possible errors are avoided by strangers addressing each other as "Dear Madam," which, as in the case of asking for a servant's character, or some such occasion, is very usual and quite admissible.

Besides the foregoing there is the familiar style of commencement, as follows:

"I am delighted, my dear Annie (or my dear Mrs. Jones), to have an opportunity to reply to your welcome note," etc.

But this intimate style is never adopted unless the social relationship is such as to warrant it. *No person should assume anything in letter-writing.* It is far better to be found fault with for being "so very formal," than to be described as "pushing." The sentence which reads so nicely and prettily to the writer may create an opposite effect upon the recipient; so *badinage* should never be attempted unless the parties are on very friendly terms. The joke harmlessly meant may bear a totally different interpretation, and cause offence when read by the person receiving the letter. We have thus touched upon a few of the most usual forms observed in social correspondence.

The commencements of business letters admit of slight variation. The formal is here the most polite and, indeed, the most convenient style, as business letters necessarily pass through many hands. For this reason, if for no other, nothing but the subject actually in hand should be mentioned in business correspondence. In social

letters are to be written to business men, it is more polite to send them to the private residence of the person for whom they are intended; or, at least, in a note separate from the business letter, marked "Private."

Official correspondence comes under the head of business, and therefore we may fittingly introduce the subject here. By "official," we mean chiefly correspondence with the various Government offices, for letters to local boards appertain to the usual polite and formal variety of the "social" style.

Suppose, for instance, that an individual has to write to the War Office upon some question, the form below may safely be accepted as a guide; care being taken to be clear and correct, and to paragraph each portion of the subject:

6, DUNCAN TERRACE,
BAYSWATER, W.
17th March, 19—.

SIR,

I have the honour to request that you will be so good as to cause inquiry to be made into the following circumstances.

The official letter should be always written within quarter margin upon foolscap paper for the convenience of the officials. All names, dates, and references should be correctly quoted in the answers to the official acknowledgments. A number is always placed on every official letter, and this number, or mark, should be quoted in the answer to it. The letter to the War Department or other office should be sent to the Under-Secretary of State for that Dept., and should end—

I have the honour to be, Sir,
Your obedient servant,

In the case of a peer being addressed, the beginning would, of course, run as follows:

MY LORD,
I have the honour to call your Lordship's attention, etc., and end—

I have the honour to be,
My Lord,
Your obedient servant,

(—)
The beginnings and endings of

official letters may all be formed upon this plan.

The endings of social letters vary as much as the commencement, and business communications pure and simple, are also capable of variation. To intimate friends ladies frequently sign themselves "Yours affectionately"; but the more usual, and less pushing, and frequently the most sincere, form is "Yours truly," or "Yours sincerely." "Yours very truly" is also common, but really carries no more weight.

The following examples for the terminations of various letters will explain themselves:—

(1) the formal—

Believe me, my dear Sir (or Madam),
Yours faithfully (or respectfully),
(———)

(2) The social—

Believe me, my dear Sir (or Madam),
Yours truly (or sincerely),
(———)

(3) More intimate—

I remain, dear Mrs.——,
Yours sincerely (or truly),
(———)

(4) Friendly—

Believe me, my dear Frank,
Ever truly yours (or sincerely your friend),
(———)

(5) Affectionate—

I am, my dearest Annie,
(Very) Affectionately yours,
(———)

The commencement and ending of a letter should always agree. If you begin "my dear," end with "my dear," and so on in all instances. But the endings and beginnings are as varied as human nature, and admit of no positive rules.

Before concluding this portion of our subject we may make a few remarks respecting the addresses of letters. There are a few simple rules as to addressing letters. The stamp should be in the upper right corner, and the name of the person and his address should be written carefully as follows:

*Jacob Menzies, Esq.,
15, Hanway Buildings,
London, S.W.*

The address should not be hustled up to the top of the envelope, nor crowded to the bottom. It should stand fairly as nearly balanced as possible, with the second line beginning about one-third of the distance nearer the right than the first line. If the direction be a long one, room must be found for it.

If a person be staying in the house of another, not a relative, it is usual to put "at" (the residence), before the house named, or only the name of the person with whom the correspondent is stopping for the time. Sometimes "Care of" is written, but this is more businesslike than social.

The spaces between the lines should be as nearly even as possible, and the writing distinct.

The signature of every letter should be particularly legible, as much time may be lost by a correspondent endeavouring to ascertain who and what the writer is. If a lady be married, it is as well sometimes to indicate the fact to a stranger by enclosing her card, or, as the Americans do, by putting Mrs. or Miss in brackets before her signature. This is especially useful when addressing editors.

We have no need to insist upon good spelling and correct grammar; such needs are obvious, but, alas! not always forthcoming. Nor need we do more than indicate the desirability of good paper and general neatness in all correspondence.

With reference to "love-letters," no rule can be laid down; but even here the less "high-falutin" writing and bombast the better. Affection is very well, but extravagance is not unlikely to provoke ridicule, and that is fatal to a lover's correspondence. As a rule, lovers do not want to be told what to write; their feelings will supply the expressions; but it is the want of form and style in love-letters which provokes the merriment and chaff inseparable from trials for breach of promise. To know how to write is what is required. There is nothing derogatory in writing affectionately; on the contrary, if the engaged couple are really loving, and wish to express their feelings in loving phrases, let them by all means do so; but let this

be done in a gentleman-like and lady-like manner. A love-letter never loses by being couched in grammatical terms, and with due regard to style and diction. A person who can write a good hand and a good letter is a boon to his correspondent, be he (or she) whom he (or she) may. A common-place subject will gain by being treated in an original or cheerful way, and the most important communication will lose its full point by being weakly expressed and poorly constructed.

Our advice to letter-writers is: Be natural, grammatical, and not too long-winded.

FORMS FOR THE ADDRESS, COMMENCEMENT, AND CONCLUSION OF LETTERS.

The Sovereign.

Address—To the King's (or Queen's) Most Excellent Majesty. *Commence*—Your Majesty; Most Gracious Sovereign; May it please your Majesty. *Conclude*—I remain (or I have the honour to remain), with the profoundest veneration (or respect), Sire (or Madam), your Majesty's most faithful subject and dutiful servant.

Princes of the Blood Royal.

Address—To His Royal Highness the Duke of Cornwall. *Commence*—Sir; May it please your Royal Highness. *Conclude*—I remain, Sir, with the utmost (or greatest) respect, your Royal Highness's most dutiful and most obedient servant.

Princes of the Blood.

Address—To His Highness (or Serene Highness) the Prince of — (or Her Highness, or Serene Highness, the Princess of —). *Commence*—Sir (or Madam), May it please your Highness. *Conclude*—I have the honour to remain, Sir (or Madam), with great respect, your Highness's most obedient servant. [The sons and daughters, brothers, sisters, uncles, and aunts of the Sovereign, are styled Princes and Princesses of the Blood Royal; nephews, nieces, and cousins, Princes and Princesses of the Blood.]

A Duke or Duchess.

Address—To His Grace the Duke

of — (or Her Grace the Duchess of —). *Commence*—My Lord Duke (or Madam). *Conclude*—I have the honour to be, My Lord Duke (or Madam), your Grace's most devoted (or most obedient and humble) servant.

N.B.—Dukes of Royal Blood are addressed as Princes.

Duke's Children.

A Duke's daughter is addressed as The Rt. Hon. Lady Maud —, or The Lady Maud —. Madam, ending as above.

Note—If a Duke's daughter marries a Peer, she assumes his rank. If otherwise, she is addressed as the Lady Maud —.

The eldest son of a Duke ranks as a Peer by courtesy, and assumes the second title of his father (not always that next in rank, but that next in the family), and his sons are addressed as Peer's sons.

A Duke's widow ranks as Duchess, and becomes Duchess Dowager when the next Peer marries, if she be his mother or grandmother. She is addressed as Her Grace the Dowager Duchess of —. If not related to the new Duke she is addressed as Her Grace (Mary) Duchess of —, and as a Peeress always.

A Duke's younger son is addressed as the Right Honourable Lord John —, or The Lord John —. His wife The Lady (John) —.

A Marquis or Marchioness.

Address—To the Most Noble the Marquis (or the Marchioness) of —. *Commence*—My Lord Marquis (or Madam). *Conclude*—I have the honour to be, My Lord Marquis, your Lordship's (or Madam, your Ladyship's) most obedient and humble servant.

Note—The widow of a Marquis ranks as a Marchioness, but if the Marquis be married she is addressed as the most Honourable the Marchioness Dowager of — (see Dowager Duchess). The form of address is as to Barons (q.v.).

Descendants as Duke's children noting difference of rank (see Barons).

An Earl or Countess.

Address—To the Right Honourable the Earl (or Countess) of —. *Commence*

—My Lord (or My Lady or Madame). *Conclude*—I have the honour to be, My Lord, your Lordship's (or Madam, your Ladyship's) most obedient and humble servant.

Descendants—See Duke's children with relative rank. The Lord William, etc. (see Baron). Earl's widow as Countess if successor be unmarried. If not, she ranks as Countess Dowager or as the Right Honourable (Emily) Countess of — if she be not mother or grandmother of reigning Earl.

A Viscount or Viscountess.

Address—To the Right Honourable the Lord Viscount (or the Viscountess) — (adding his titles). *Commence*—My Lord (or Madam). *Conclude*—I have the honour to be, My Lord, your Lordship's (or Madam, your Ladyship's) most obedient and humble servant.

Note.—Viscount's wives, widow and children as Baron's relatives.

A Baron or Baroness.

Address—To the Right Honourable the Lord (or Lady or the Baroness) —. *Commence* and *conclude*—As to Viscount and Viscountess. A *Baroness in her own right* is addressed as Baroness, or as The Lady —. Letters begin "Madam," and she is spoken to as "Your Ladyship," and her children are addressed as Baron's children. *Baron's daughter*.—(1) If married to the son of a Baron, Viscount, or Earl, or to a Commoner, she is addressed as the Honourable Mrs. —; (2) If married to Baronet or Knight, as the Honourable Lady —; (3) If married to Duke, Earl, or Marquis, she is addressed as The Lady (Angela) —, and as "Madam." Letters to her conclude as to Viscountess or Baroness. *Baron's son* is addressed as The Honourable (Edgar) —. A Scotch Baron's eldest son is "Master of —." Letters begin "Sir," and end as usual. The wife or the widow (as widow) of a Baron's son is addressed—if the daughter of a Duke, Marquis, or Earl—as The Lady (Maud) —. If the daughter of a lesser rank as the Honourable Mrs. —. The titles of *Baron's widow* are relatively as Duke's widow. She

is the Right Honourable the Baroness Dowager, or Right Honourable (Agnes) Baroness. (See Duke.)

Baronets and Knights and their Wives.

Address—To Sir Norman Campbell, Bart.; To Lady Campbell; To Sir Sidney H. Waterlow; to Lady Waterlow. *Commence*—Sir (or Madam). *Conclude*—I have the honour to be, Sir, your (or Madam), or your Ladyship's) most obedient and humble servant. The title of "Knight" is not used in social address, only in documents. A *Baronet's wife*, if daughter of an Earl or higher rank, is addressed as The Lady (Evelyn) —. If of lower rank than Earl—the daughter of Baron or Viscount—she is addressed as "The Honourable Lady —." A *Baronet's widow* is addressed as above, unless the Baronet succeeding be married. Then, if she be his mother or grandmother, she is addressed as The Dowager Lady —. If not so related, her Christian name is prefixed, as Evelyn Lady —, unless her own title by birth be superior, as the daughter of a Marquis or Duke.

Esquires and their Wives.

Address—To James Wallis Dennistoun, Esquire, of Dennistoun; To Mrs. Dennistoun, of Dennistoun. *Commence*—Sir (or Madam). *Conclude*—I have the honour to be, Sir (or Madam), your most obedient servant.

The Speaker of the House of Commons.

Address—To the Honourable —, Speaker of the House of Commons. *Commence*—Sir, or Mr. Speaker. *Conclude*—I have the honour to be, Sir, your most obedient servant.

A Member of the House of Commons not ennobled.

Address—To Hugh Birley, Esq., M.P. *Commence*—Sir. *Conclude*—I have the honour to be, Sir, your most obedient servant. If titled, address according to rank.

Archbishops of England and Ireland, Bishops of the Churches of England and Ireland.

Address—To his Grace the Lord Archbishop of Canterbury. To the

Right Reverend the Lord Bishop of London. *Commence*—My Lord Archbishop, My Lord Bishop. *Conclude*—I remain with the highest respect, my Lord Archbishop, your Grace's most devoted servant. I have the honour to be, my Lord Bishop, your Lordship's most humble servant.

Note.—The Primate's title is "The Most Reverend Father in God (William) by Divine Providence Lord Archbishop of Canterbury."

Other English Bishops are addressed "by Divine Permission," and "Your Lordship," not "Your Grace."

The Primate of Ireland would be "His Grace the Lord Primate of Ireland."

N.B.—The Bishop of Meath only is the Most Reverend of Bishops. All other Bishops are Right Reverend — the Lord Bishop of — or The Right Reverend the Bishop Suffragan; or The Lord Bishop of —.

Letters commence—Right Reverend Sir. *Letters conclude*—I have the honour to be, Right Reverend Sir, your most obedient, humble servant.

Irish Bishops consecrated since 1868 are addressed as Bishops Suffragan, viz., "Right Reverend."

Retired Bishops are also so addressed. Right Reverend Bishop —, or The Right Reverend Bingham Martin, D.D.

Scotch Bishops are addressed personally as Right Reverend Bishop Mackenzie, not Right Reverend the Lord Bishop of —, and as Suffragan Bishops in letters.

Colonial Bishops as English Bishops.

Wives of Bishops have no distinctive address other than to ordinary ladies in Society.

Deans and Archdeacons.

Address—To the Very Reverend the Dean of York; To the Venerable the Archdeacon. *Commence*—Very Reverend Sir, Venerable Sir. *Conclude*—I have the honour to be, Very Reverend Sir, or Venerable Sir, your most obedient servant.

Clergymen and Ministers.

Address—If the son of a Duke, as The Reverend Lord (James) —, adding

degrees or titles. If son of an Earl, The Reverend The Honourable John —. A Clergyman or Minister who is a Commoner, is addressed as The Reverend Alfred —. *Commence*—Reverend Sir. *Conclude*—I have the honour to be, Sir (as usual).

Cardinal.

Address—His Eminence. *Commence*—Your Eminence.

Lord of Session, Lord Provost.

Address—The Honourable Lord. The Right Honourable the Lord Provost. *Commence* and *Conclude*.—As to a Baron.

The following personages are addressed as Esquires—as Sir. The titles are as follows:—*Lord Justice of Appeal*—To the Right Honourable the Lord Justice B —; *Vice-Chancellor*—To His Honour Vice-Chancellor J —, or To the Honourable Sir J. B —, Vice-Chancellor, etc., etc.; *Puisne Judge*—To Mr. Justice A —.

Lord Mayor.

Address—The Right Honourable the Lord Mayor of —, or The Right Honourable Sir Arthur B —, Lord Mayor of —. *Commence* and *Conclude*—As to a Baron.

A Mayor is addressed as The Worshipful the Mayor of — (and as Esquire); in a few cities as "Right Worshipful."

Companions of Orders of Knighthood are addressed as So-and-So, Esq., C.B., or C.M.G. as may be.

If Knight Companions, as Knights, with K.C.B., or other distinction, affixed, as—Sir James Elphinstone, K.C.B., C.S.I.

Miscellaneous.

Widows of Peers—If widows of Peers re-marry they lose their titles, save by courtesy, except in the case of the widow of an Honourable, who is never reinstalled. The widow marrying again an inferior in rank assumes *his* rank.

Divorced Ladies lose all titles. They assume their maiden name, with *Mrs.* prefixed.

Public Bodies.

Are addressed through their Secretaries, or collectively, as "The Governor and Company of —," "To the Directors of —."

MISCELLANEOUS

AGES OF ANIMALS.

TO TELL A PERSON'S AGE

	Years.
Elephant	100
Rhinoceros	20
Camel	100
Lion	25-70
Tigers, and leopards	25
Beavers	50
Deer	20
Wolf	20
Fox	14-16
Monkeys and baboons	16-18
Hare	8
Squirrel	7
Rabbit	7
Swine	25
Stag	under 50
Horse	30
Ass	30
Sheep	under 10
Cow	20
Ox	30
Swans and ravens	200
Eagle	100
Geese	80
Hens and pigeons	10-16
Hawks	36-40
Cranes	24
Blackbird	10-12
Peacock	20
Pelican	40-50
Thrush	8-10
Wren	2-3
Nightingale	15
Blackcap	15
Linnet	14-23
Goldfinch	20-24
Redbreast	10-12
Skylark	10-30
Titlark	5-6
Chaffinch	20-24
Starling	10-12
Pike	30-40
Salmon	16
Cod fish	14-17
Eel	10
Crocodile	100
Tortoise	100-200
Whale (estimated)	1,000

Ask a friend to tell you in which column or columns his age appears. Add together the figures at the top of such columns and you have the secret. Thus suppose your own age to be 19, you will find that number in the first, second and fifth columns; add the first figures of these three columns = 19.

1	2	4	8	16	32
3	3	5	9	17	33
5	6	6	10	18	34
7	7	7	11	19	35
9	10	12	12	20	36
11	11	13	13	21	37
13	14	14	14	22	38
15	15	15	15	23	39
17	18	20	24	24	40
19	19	21	25	25	41
21	22	22	26	26	42
23	23	23	27	27	43
25	26	28	28	28	44
27	27	29	29	29	45
29	30	30	30	30	46
31	31	31	31	31	47
33	34	36	40	48	48
35	35	37	41	49	49
37	38	38	42	50	50
39	39	39	43	51	51
41	42	44	44	52	52
43	43	45	45	53	53
45	46	46	46	54	54
47	47	47	47	55	55
49	50	52	56	56	56
51	51	53	57	57	57
53	54	54	58	58	58
55	55	55	59	59	59
57	58	60	60	60	60
59	59	61	61	61	61
61	62	62	62	62	62
63	63	63	63	63	63

EXPECTATION OF LIFE

Estimated from death rate returns of the Registrar General's Department during a period of ten years. The number of persons of each sex of each million born who may expect to be alive at the end of each succeeding year up to 100 years, and also the number of years each may expect to live :—

Age.	Of 1,000,000 born the number surviving at the end of each year of life.		Mean after-life-time (expectation of life).	
			Mean after-life-time (expectation of life).	
	Males.	Females.	Males.	Females.
45	522,374	560,174	22·07	24·06
46	513,702	552,602	21·44	23·38
47	504,836	544,892	20·80	22·71
48	495,761	537,043	20·18	22·03
49	486,479	529,048	19·55	21·36
50	476,980	520,001	18·93	20·68
51	467,254	512,607	18·31	20·01
52	457,022	504,188	17·71	19·34
53	446,510	495,645	17·12	18·66
54	435,729	486,973	16·53	17·98
55	424,677	477,440	15·95	17·33
56	413,351	467,443	15·37	16·69
57	401,740	456,992	14·80	16·06
58	389,827	446,079	14·24	15·45
59	377,591	434,695	13·68	14·84
60	365,011	422,835	13·14	14·24
61	352,071	410,477	12·60	13·65
62	338,820	397,644	12·07	13·08
63	325,258	384,319	11·56	12·51
64	311,368	370,495	11·05	11·96
65	297,156	356,165	10·55	11·42
66	282,638	341,326	10·07	10·90
67	267,829	325,988	9·60	10·39
68	252,763	310,170	9·14	9·89
69	237,487	293,899	8·70	9·41
70	222,056	277,225	8·27	8·95
71	206,539	260,207	7·85	8·50
72	190,971	242,934	7·45	8·07
73	175,449	225,497	7·07	7·65
74	160,074	208,003	6·70	7·25
75	144,960	190,566	6·34	6·87
76	130,227	173,316	6·00	6·51
77	115,986	156,392	5·66	6·16
78	102,359	139,927	5·37	5·82
79	89,449	124,065	5·07	5·50
80	77,354	108,935	4·79	5·20
81	66,153	94,662	4·51	4·90
82	55,842	81,305	4·26	4·63
83	46,489	68,966	4·01	4·37
84	38,132	57,723	3·58	4·12
85	30,785	47,631	3·56	3·88
86	24,436	38,710	3·36	3·66
87	19,054	30,958	3·17	3·46
88	14,576	24,338	2·99	3·26
89	10,926	18,788	2·82	3·08
90	8,015	14,225	2·66	2·90
91	5,748	10,553	2·51	2·74
92	4,025	7,658	2·37	2·58
93	2,749	5,429	2·24	2·44
94	1,828	3,756	2·12	2·30
95	1,183	2,533	2·01	2·17
96	742	1,661	1·90	2·11
97	452	1,057	1·81	2·03
98	266	653	1·72	1·83
99	151	389	1·65	1·73
100	82	225	1·61	1·68

FOREIGN COINAGE AND EXCHANGE

Exchange.—Remittances of money between different countries, by which a sum of money of one country is exchanged for a sum of money of another country, the sums thus exchanged being equivalent in value.

Par of Exchange.—According to the standard measure of value of money in the United Kingdom and France, a sovereign, or £1 sterling, is considered equal in value to 25 francs 22 centimes, or 25·22 francs, and when sums of money are exchanged at this rate between the two countries, the exchange is said to be *at par*. Thus, the *par of exchange* means that sum in the current coin of one country which possesses the same intrinsic or real value as a certain sum in the currency of another country.

In calculating exchanges, a variable sum in the currency of one country is allowed for a certain sum in the currency of another country, because exchange is very seldom at par. Thus, the United Kingdom exchanges with France £1 sterling for a variable number of francs, and with the United States £1 sterling for a variable number of dollars; but with Buenos Ayres the United Kingdom exchanges a variable number of pence for a paper dollar, and with Portugal a variable number of shillings for a milreis.

Course of Exchange.—When one country sends a greater amount of remittances to another country than it receives from it, the exchange is above par; but, on the other hand, when it sends a less amount of remittances to the other country than it receives from it, the exchange is below par; the rate of exchange being in favour of the country which sends to the other the less amount of remittances. If in exchange between the United Kingdom and France £1 is reckoned as

equivalent to more than 25·22 francs, the exchange is below par, and in favour of the United Kingdom; but if £1 is reckoned as equivalent to less than 25·22 francs, the exchange is above par, and against the United Kingdom. Thus, the *course of exchange*, at any date, means that sum in the current coin of one country which is reckoned as being equivalent to a certain sum in the currency of another country.

Calculations of Exchange.—These operations are performed by the Rule of Three or by Practice. Thus, the exchange between the United Kingdom and France being 25·50 francs, or 25 francs 50 centimes to £1 sterling, 5,000 francs may be converted into English money by the following statement:— $25\cdot50 : 5,000 :: 1 :$ the sum required in English money, or sum required. Divide 5,000 by 25·50; product, £196 1s. 6½d. Conversely, £200 may be converted into French money thus:—Sterling $1 : 200 :: 25\cdot50 :$ to the sum required in French money, or sum required = $\frac{200 \times 25\cdot50}{1} = 5,100$ francs.

Sterling, as explained in Tables of British Money, is a term applied to distinguish the current coin or standard money of the United Kingdom, from stock or money in the funds, etc.

Bullion is applied indifferently to gold and silver, coined or uncoined; though, in its proper and more restricted meaning, it is applied only to gold and silver in bars, ingots, or any form save that of coined money.

Specie is sometimes applied to gold and silver coin in contradistinction to paper money.

In the valuation of coins in the following Table, the price of standard or

Mint gold is reckoned at £3 17s. 10½d. per ounce, while that of silver is taken at 2s. per ounce; pure gold and silver, however, are worth more than Mint gold and silver, the precious metals being deteriorated in value by the addition of a certain quantity of copper alloy to give hardness to the coin. The value, according to sterling money of the United Kingdom, of the principal gold and silver coins of foreign countries are given under their respective names. The money in which accounts are kept is also specified, and the par of exchange with the United Kingdom abbreviated P. of E.

Austria.—Gold: 20 Krone, 16s. 8d.; 10 Krone, 8s. 4d. Silver: 5 Krone, 4s. 2d.; 2 Krone, 1s. 8d.; 1 Krone, 10d. Nickel: 20 Heller, 2d.; 10 Heller, 1d. Monetary unit: 1 Krone of 100 Heller. P. of E. Kn. 24=£1 sterling. Accounts kept as above.

Canada.—Accounts kept in Dollars and Cents, of which 100 Cents = 1 Dollar. Formerly accounts were kept in £ s. d. £1 currency = about 16s. 6d. sterling; £1 sterling = about £1 4s. 4d. currency. P. of E. 4 Dollars 86½ Cents per £1. The Dollar is estimated at 4s. 2d.

Denmark, Norway and Sweden.—Gold: 20 Kroner, £1 2s. 3d.; 10 Kroner, 11s. 1½d.; 5 Kroner, 5s. 6½d. Silver: 2 Kroner, 2s. 2½d.; 1 Kroner, 1s. 1½d.; 0.50 Ore, 6½d.; 0.25 Ore, 3½d.; 0.10 Ore, 1½d. P. of E. 18 Kroners=£1 sterling. Monetary unit, 1 Kroner of 100 Ore.

France and Switzerland.—Gold: 20 Francs, Napoleon, 16s.; 10 Francs, 8s.; 5 Francs, 4s. Silver: 5 Francs, 4s.; 2 Francs, 1s. 7d.; 1 Franc, 9½d. Nickel: 25 centimes, 2½d. Accounts kept in Francs and Cents., of which 100 Cents. make 1 Franc. P. of E. 25 Francs 22 Cents. per £1.

Germany.—Gold: 20 Marks, £1; 10 Marks, 10s.; Silver: 5 Marks, 5s.; 3 Marks, 3s.; 2 Marks, 2s.; 1 Mark, 1s.; 0.50 Pfennig, 6d. Nickel: 25 Pfennig, 3d.; 10 Pfennig, 1½d.; 5 Pfennig, ½d. Accounts kept in Marks and Pfennigs. Monetary unit, 1 Mark of 100 Pfennig. P. of E. 20.20 Marks =£1 sterling.

India.—Silver: 1 Rupee, 1s. 4d.; 8 Annas, 8d.; 4 Annas, 4d.; 2 Annas, 2d. Nickel: 1 Anna, 1d. Monetary unit, 1 Rupee of 16 Annas. P. of E. 1 Rupee=1s. 4d. English sovereign passes as 15 Rupees. Accounts kept in Rupees, etc.

Italy (generally).—Same as in France.

Portugal.—Gold: 10 Milreis, £2 4s. 4d.; 5 Milreis, £1 2s. 2d.; 2 Milreis, 8s. 10d.; 1 Milreis, 4s. 5d. Silver: 1 Milreis, 4s. 5d.; 0.500 Reis, 2s. 2½d.; 0.200 Reis, 10½d. Nickel: 100 Reis, 5½d.; 50 Reis, 2½d. Monetary unit, 1 Milreis of 1000 Reis. P. of E. 4s. 5d. Milreis. Exchange very fluctuating. Accounts kept as above.

Prussia.—See Germany.

Russia.—Gold: Imperial = 10 Roubles, 21s. 4d.; Half Imperial, 10s. 8d.; Silver: Rouble, 2s. 1½d.; Poltin or Half Rouble, 1s. 0½d.; Polpoltin or Quarter Rouble, 6½d.; 10 Copeck piece, 2½d.; 5 Copeck piece, 1½d. Accounts kept in Roubles and Copecks, of which 100 Copecks make 1 Rouble. P. of E. 9 Roubles 40 Copecks per £1.

Spain.—Gold: 25 Pesetas (Alfonso), £1; 20 Pesetas, 16s. Silver: 5 Pesetas, 4s.; 2 Pesetas, 1s. 7d.; 1 Peseta, 9½d.; 0.50 Centimes, 4½d. Gold at a premium of 8 per cent. over paper. P. of E. 27.00 Pesetas to £1 sterling. Accounts kept as above. Rate of exchange very fluctuating.

Sweden.—See Denmark and Norway.

Switzerland.—See France.

United States.—Gold: Eagle = 10 Dollars, £2 1s. 1d.; Half Eagle = 5 Dollars, £1 os. 6½d.; Quarter Eagle = 2½ Dollars, 10s. 3½d.; Dollar, 4s. 1½d. Silver: Dollar, marked \$, 4s. 1½d.; Half Dollar, 2s. 0½d.; Quarter Dollar, 1s. 0½d.; Dime = 10¢ Dollar, 5d.; Half Dime, 2½d. Copper: Cent, ½d.; Accounts kept in Dollars and Cents; of which 100 Cents make 1 Dollar. P. of E. 4 Dollars 86½ Cents per £1. In Exchange the Dollar is estimated at 4s. 2d.

LARGEST CITIES OF THE WORLD

	Population.		Population.
London (the Metropolis)	4,878,218	Kief	247,432
Birmingham	553,155	Kobe, Japan	215,780
Bradford (Yorks)	290,323	Kyoto	353,139
Bristol	367,979	Lahore	202,964
Hull	266,762	Leipsig	456,124
Leeds	470,268	Lille	210,693
Leicester	236,124	Lisbon	356,009
Liverpool	685,276	Lodz	315,209
Manchester	543,969	Louisville	204,731
Newcastle-on-Tyne	272,969	Lucknow	264,049
Nottingham	257,489	Lyons	459,099
Portsmouth	208,291	Madras	542,020
Sheffield	455,557	Madrid	539,835
Belfast	349,180	Magdeburg	229,667
Dublin	375,350	Marselles	491,161
Edinburgh	345,747	Melbourne	532,200
Glasgow	847,584	Mexico City	344,721
Alexandria	376,085	Milan	552,853
Amsterdam	564,928	Milwaukee	285,315
Antwerp	304,032	Minneapolis	202,718
Baltimore	566,000	Montevideo	276,034
Bangkok	600,000	Montreal	267,730
Barcelona	533,090	Moscow	1,372,800
Benares	209,331	Munich	552,000
Berlin	2,096,318	Naples	563,541
Bombay	977,822	Nagoya	244,145
Bordeaux	257,638	Newark	246,070
Boston	609,762	New Orleans	341,000
Breslau	486,060	New York	4,285,435
Brussels	623,202	Nuremberg	261,081
Bucharest	294,572	Odessa	405,041
Buda-Pesth	802,235	Osaka	821,235
Buenos Ayres	1,102,155	Palermo	309,694
Buffalo	352,387	Paris	2,735,165
Cairo	676,785	Peking	1,000,000
Calcutta	847,796	Philadelphia	1,500,595
Canton	1,600,000	Pittsburg	321,616
Cape Town	77,668	Prague	470,906
Chicago	2,107,620	Rangoon	234,881
Christiania	230,800	Riga	282,943
Cincinnati	325,902	Rio de Janeiro	628,675
Cleveland	381,768	Rome	545,234
Cologne	372,529	Rotterdam	396,855
Constantinople	1,125,000	San Francisco	475,000
Copenhagen	438,000	St. Petersburg	1,505,200
Damascus	225,000	St. Louis	575,238
Detroit	285,704	Santiago, Chile	296,695
Delhi	208,757	Shanghai	380,000
Dresden	530,400	Smyrna	201,000
Dusseldorf	213,711	Stockholm	336,019
Florence	205,589	Sydney	544,700
Frankfort-on-Main	288,989	Teheran	280,000
Genoa	234,710	The Hague	251,749
Haidarabad	448,466	Tokyo (Japan)	1,440,121
Hamburg	844,579	Toronto	226,001
Hanover	235,649	Turin	370,132
Havana	235,981	Valencia	215,530
Hong Kong	283,905	Vienna	1,979,003
Jersey City	206,433	Warsaw	638,209
Johannesburg	155,642	Washington	278,718

MOUNTAINS AND RIVERS

PRINCIPAL MOUNTAINS IN THE WORLD

AFRICA.

	Height (about)
Kenia	3 $\frac{3}{4}$ miles.
Kilim-Njaro.	3 $\frac{1}{2}$ "
Ligonyi	2 $\frac{3}{4}$ "
Ruwenzori	3 $\frac{1}{10}$ "

AMERICA, NORTH.

Drizaba	3 $\frac{1}{2}$ miles.
Mount Brown	3 $\frac{1}{5}$ "
Mount St. Elias.	3 $\frac{1}{2}$ "
Nevado de Toluca	3 $\frac{1}{3}$ "

AMERICA, SOUTH.

Aconcagua, Chili	4 $\frac{1}{2}$ miles.
Mercedario	4 $\frac{1}{2}$ "
Gualtieri	4 $\frac{1}{2}$ "
Huascan	4 $\frac{1}{2}$ "

ASIA.

	Height (about)
Everest, Himilayas (India).	5 $\frac{1}{2}$ miles.
Dapsang, Karakorums (India)	5 $\frac{1}{2}$ "
Tagarina, Pamir	4 $\frac{1}{2}$ "
Khan-tangri, Tian-shan	4 $\frac{1}{2}$ "

AUSTRALIA AND POLYNESIA.

Charles-Louis, New Guinea	3 $\frac{3}{4}$ miles.
Mauna Kea, Hawaii	2 $\frac{1}{2}$ "
Mount Cook, New Zealand.	2 $\frac{1}{2}$ "
Kinabalu, Borneo	2 $\frac{1}{2}$ "
Mount Townsend, N.S.W.	1 $\frac{1}{2}$ "
Mount Kosciusko, N.S.W.	1 $\frac{1}{2}$ "

EUROPE.

Mont Blanc, Alps	3 miles.
Ben Nevis, Scotland	$\frac{4}{5}$ "
Snowdon, Wales	$\frac{4}{5}$ "
Cairntoul, Scotland.	$\frac{4}{5}$ "
Scawfell Pike, England.	$\frac{4}{5}$ "
Ben Lomond, Scotland.	$\frac{4}{5}$ "

CHIEF RIVERS IN GREAT BRITAIN

Name.	Length.	Name	Length.
Clyde	79 miles.	Severn	210 miles.
Forth	51 "	Tay	120 "
Great Ouse.	100 "	Thames.	250 "
Mersey	70 "	Trent	150 "

GREAT RIVER SYSTEMS OF THE WORLD

Name.	Length.	Name	Length.
Amazon (S. America)	3,400 miles.	Niger (Africa).	2,600 miles.
Amur (Eastern Asia).	2,800 "	Nile (Egypt)	3,700 "
Congo (West Africa)	2,600 "	Ob or Obi (Siberia)	3,200 "
Danube (Central Europe)	1,700 "	Orinoco (S. America).	1,400 "
Ganges and Brahmapootra (India)	1,800 "	St. Lawrence (Canada)	2,400 "
Hoang-Ho (China)	2,500 "	Volga (Russia)	2,200 "
Indus (N.W. India)	1,900 "	Winnipeg-Nelson (British N. America)	1,500 "
La Plata (S. America)	2,300 "	Yong-tsze-Kiang (China)	3,200 "
Lena (Siberia)	2,900 "	Yenisei (Siberia)	3,200 "
Mackenzie (N. America).	2,300 "	Yukon (Alaska, N. America)	2,200 "
Mississippi (N. America).	4,100 "	Zambezi (Africa)	1,600 "
Missouri (N. America)	3,050 "		
Murray (Australia)	1,500 "		

A UNIVERSAL TIME TABLE

12 o'clock noon at London.

Adelaide	9.14 p.m.	Lisbon	12.24 p.m.
Aden	3.3 "	Liverpool	11.48 a.m.
Algiers	12.11 "	Madeira	10.53 "
Algoa Bay	1.13 "	Madras	5.22 p.m.
Amsterdam	12.19 "	Madrid	11.46 a.m.
Athens	1.35 "	Malta (Valetta)	12.58 p.m.
Auckland	11.39 "	Manchester	11.50 a.m.
Bangkok	6.43 "	Marseilles	12.20 p.m.
Barbadoes	7.59 a.m.	Melbourne	9.39 "
Belgrade	1.23 p.m.	Monte Video	8.14 a.m.
Berlin	12.53 "	Montreal	7.5 a.m.
Bermuda	7.40 a.m.	Moscow	2.30 p.m.
Bombay	4.55 p.m.	Naples	12.57 "
Bordeaux	11.58 a.m.	Natal	2.4 "
Boston (U.S.A.)	7.13 "	Newcastle	11.54 a.m.
Brest	11.41 "	Newfoundland	8.28 "
Brindisi	1.11 p.m.	New Orleans	6.0 "
Brisbane	10.13 "	New York	7.4 "
Brussels	12.16 "	Nijni Novgorod	2.58 p.m.
Buda Peste	1.16 "	Odessa	2.5 "
Buenos Ayres	8.3 a.m.	Panama	6.40 a.m.
Cairo	2.5 p.m.	Paris	12.10 p.m.
Calcutta	5.53 "	Pekin	7.46 "
Cape Horn	7.32 a.m.	Pernambuco	9.39 a.m.
Cape Town	1.13 p.m.	Philadelphia	6.58 "
Cayenne	8.27 a.m.	Quebec	7.12 "
Charlestown	6.37 "	Rangoon	6.24 p.m.
Chicago	6.8 "	Rio Janeiro	9.4 a.m.
Christchurch	11.32 p.m.	Rome	12.50 p.m.
Christiania	12.43 "	San Francisco	3.52 a.m.
Colombo	5.19 "	Shanghai	8.3 p.m.
Constantinople	1.56 "	Singapore	6.55 "
Copenhagen	12.49 "	Smyrna	1.49 "
Dublin	11.35 a.m.	St. Louis	6.0 a.m.
Edinburgh	11.48 "	St. Petersburg	2.3 p.m.
Foochow	7.41 p.m.	Stockholm	1.12 "
Geneva	12.23 "	Suez	2.10 "
Gibraltar	11.38 a.m.	Sydney	10.4 "
Glasgow	11.41 "	Teheran	3.29 "
Halifax (N.S.)	7.44 a.m.	Tifis	3.2 "
Hamburg	12.37 p.m.	Toronto	6.40 a.m.
Helsingfors	1.40 p.m.	Trieste	12.54 p.m.
Hobart Town	9.48 "	Trinidad	7.53 a.m.
Hongkong	7.34 "	Utah	4.29 "
Honolulu	1.28 a.m.	Valentia	11.18 "
Jerusalem	2.23 p.m.	Valparaiso	7.12 "
Kingston (Jamaica)	6.53 a.m.	Vancouver's Island	3.47 "
Lahore	4.59 p.m.	Vienna	1.5 p.m.
Leipzig	12.50 "	Warsaw	1.24 "
Lima	6.51 a.m.	Washington	6.51 a.m.
		Wellington	11.38 p.m.
		Yokohama	9.18 "

TABLE OF TIME BETWEEN DATES

By which may be ascertained the Number of Days from any Day in One Month to the same in any other, etc.

Columns.	1	2	3	4	5	6	7	8	9	10	11	12
Months.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
January	365	31	59	90	120	151	181	212	243	273	304	334
February	334	365	28	59	89	120	150	181	212	242	273	303
March	303	337	365	31	61	92	122	153	184	214	245	275
April	273	306	334	365	30	61	91	122	153	184	214	244
May	245	275	304	335	365	31	61	92	123	153	184	214
June	214	245	273	304	334	365	30	61	92	123	153	183
July	184	215	243	274	304	335	365	31	62	92	123	153
August	153	184	212	242	273	304	334	365	31	61	92	122
September	122	153	181	212	242	273	303	334	365	30	61	91
October	92	123	151	182	212	243	273	304	335	365	31	61
November	61	92	120	151	181	211	242	273	304	334	365	30
December	31	62	90	121	151	182	212	243	274	304	335	365

To find number of days from any date in one month (June 20, e.g.) to the same in any other month (Nov. 20, e.g.). Under Nov. in Col. 11, in a line with June in col. of months, is 153, the number of days between the dates. In Leap Year, when Feb. 29 comes between the two dates, there will be one day more than is shown by the Table. To find the date when a bill falls due, the three days of grace must be added.

TABLE OF TIME BETWEEN DATES

By which may be ascertained the Number of Days between any two Dates and from any Day in the Year to December 31 the time to which Interest is generally calculated.

Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Da. of Mo. Yr.	Da. of Mo. Yr.	Da. of Mo. Yr.	Da. of Mo. Yr.	Da. of Mo. Yr.	Da. of Mo. Yr.	Da. of Mo. Yr.	Da. of Mo. Yr.	Da. of Mo. Yr.	Da. of Mo. Yr.	Da. of Mo. Yr.	Da. of Mo. Yr.
1	1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9	9	9
10	10	10	10	10	10	10	10	10	10	10	10
11	11	11	11	11	11	11	11	11	11	11	11
12	12	12	12	12	12	12	12	12	12	12	12
13	13	13	13	13	13	13	13	13	13	13	13
14	14	14	14	14	14	14	14	14	14	14	14
15	15	15	15	15	15	15	15	15	15	15	15
16	16	16	16	16	16	16	16	16	16	16	16
17	17	17	17	17	17	17	17	17	17	17	17
18	18	18	18	18	18	18	18	18	18	18	18
19	19	19	19	19	19	19	19	19	19	19	19
20	20	20	20	20	20	20	20	20	20	20	20
21	21	21	21	21	21	21	21	21	21	21	21
22	22	22	22	22	22	22	22	22	22	22	22
23	23	23	23	23	23	23	23	23	23	23	23
24	24	24	24	24	24	24	24	24	24	24	24
25	25	25	25	25	25	25	25	25	25	25	25
26	26	26	26	26	26	26	26	26	26	26	26
27	27	27	27	27	27	27	27	27	27	27	27
28	28	28	28	28	28	28	28	28	28	28	28
29	29	29	29	29	29	29	29	29	29	29	29
30	30	30	30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31	31	31	31

To find number of days between any two dates (April 4 and Nov. 7, e.g.) in the same year. April 4 is the 94th day in the year; Nov. 7 is the 311th day. Subtract 94 from 311; the result, 217, is the number of days between the dates. (I.) To find the number of days between any date in one year (April 4, e.g.) and any date in the following year (Nov. 7, e.g.) April 4 is the 94th day in one year. Nov. 7 the 311th day in the year following. Subtract 94 from 365; the result, 271, gives the number of days to end of year. Add 271 to 311; the result, 582, is the number of days between the dates. (II.) To find date on which a bill, payable at a given number of days, falls due (e.g. a bill at 60 days' sight from April 4). April 4 is the 94th day of the year. Add 48 (the number of days the bill has to run, including 3 days of grace) to 94; the result, 142, shows that the bill falls due on the 142th day of the year, which is May 17. (IV.) To find the number of days from any date (April 4, e.g.) to the end of the year. April 4 is the 94th day of the year. Subtract 94 from 365; the result, 271, gives the number of days to Dec. 31.

[Note.—In Leap Year, one day more must be added in each case if January 29 should come between the dates under consideration.]

MISCELLANEOUS INFORMATION

PERPETUAL CALENDAR

To ascertain the day of the week on which any date fell or will fall in any of the years from 1800 to 2000.

TABLE OF CENTURIES.

G	F	E	D	C	B	A
A	G	F	E	D	C	B
B	A	G	F	E	D	C
C	B	A	G	F	E	D
D	C	B	A	G	F	E
E	D	C	B	A	G	F
F	E	D	C	B	A	G

TABLE OF YEARS.

	05	11	16	22		33	39	44	50		61	67	72	78		89	95
00	06		16	23	28	34		45	51	56	62		73	79	84	90	
01	07	12	18		29	35	40	46		57	63	68	74		85	91	96
02		13	19	24	30		41	47	52	58		69	75	80	86		97
03	08	14		25	31	36	42		53	59	64	70		81	87	92	98
	09	15	20	26		37	43	48	54		65	71	76	82		93	99
04	10		21	27	32	38		49	55	60	66		77	83	88	94	

DIRECTIONS.—Among the figures in the Centuries Table find the first two figures of the year in question, and in the Table of Years find the last two figures of it. The letter at the intersection of the column of the two tables is the *Year Letter*. Now refer to the Table of Months and find the *Key Figure* opposite the month in question. The day of the week required will then be found in the Table of Days at the intersection of the columns of the *Key Figure* and the day of the month.

EXAMPLE.—To find the day of the week on which December 1, 1909, fell. Find 19 in the Table of Centuries and 09 in the Table of Years. The Year Letter at the intersection of their columns is D. In the Table of Months the key figure at the intersection of the D and December columns is 4. In the Table of Days the day of the week at the intersection of the key figure (4) and day of the month (1st) columns is Wednesday, which is the day of the week that is required.

15	16	17	18
19	20	21	22

TABLE OF MONTHS.

Key Figure. TABLE OF DAYS.

	A	B	C	D	E	F	G	1	Sun.	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.
Leap Year.	Jan.	2	3	4	5	6	7	1	2	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.
	Feb.	5	6	7	1	2	3	4	3	Tue.	Wed.	Thu.	Fri.	Sat.	Sun.
	Jan.	3	4	5	6	7	1	2	4	Wed.	Thu.	Fri.	Sat.	Sun.	Mon.
	Feb.	6	7	1	2	3	4	5	5	Thu.	Fri.	Sat.	Sun.	Mon.	Tue.
	Mar.	6	7	1	2	3	4	5	6	Fri.	Sat.	Sun.	Mon.	Tue.	Wed.
	Apr.	2	3	4	5	6	7	1	7	Sat.	Sun.	Mon.	Tue.	Wed.	Thu.
	May	4	5	6	7	1	2	3		1	2	3	4	5	6
	June	7	1	2	3	4	5	6		8	9	10	11	12	13
	July	2	3	4	5	6	7	1		15	16	17	18	19	20
	Aug.	5	6	7	1	2	3	4		22	23	24	25	26	27
	Sept.	1	2	3	4	5	6	7		29	30	31			
	Oct.	3	4	5	6	7	1	2							
	Nov.	6		1	2	3	4	5							
	Dec.	1	2	3	4	5	6	7							

LEAP YEARS.—For Leap Year dates in January and February use the January and February Tables at the top of the Table of Months.

PASSPORTS

APPLICATIONS for Foreign Office Passports must be made on a form which may be obtained from "THE PASSPORT DEPARTMENT, FOREIGN OFFICE, LONDON, S.W." The particulars required must be filled in and the form returned under cover to reach the Foreign Office before 5 p.m. on the day prior to that on which the Passport is to be issued.

The charge for a Passport, whatever number of persons may be named in it, is 2s. Passports are issued at the Foreign Office, between the hours of 11 and 4 ON THE DAY FOLLOWING THAT ON WHICH THE APPLICATION FOR THE PASSPORT HAS BEEN RECEIVED, except on Sundays and Public Holidays, when the Passport Office is closed. If the applicant does not reside in London, the Passport may be sent by post, and a Postal Order for 2s. should in that case accompany the application. POSTAGE STAMPS WILL NOT BE RECEIVED IN PAYMENT.

Foreign Office Passports are granted—

1. To natural-born British subjects, viz., persons born within His Majesty's Dominions, and to persons born abroad who derive British nationality from a father or paternal grandfather born within His Majesty's Dominions.
2. To the wives and widows of such persons; and
3. To persons naturalized in the United Kingdom, in the British Colonies, or in India.

A married woman is deemed to be a subject of the State of which her husband is for the time being a subject.

Passports are granted to such persons as are known to the Secretary of State, or recommended to him by some person who is known to him; or—

1. In the case of natural-born British subjects and persons naturalized in the United Kingdom, upon the production of a Declaration by the applicant on the form referred to above, verified by a Declaration

made by any *Banking Firm* established in the United Kingdom, or by any *Mayor, Magistrate, Justice of the Peace, Minister of Religion, Barrister-at-law, Physician, Surgeon, Solicitor, or Notary*, resident in the United Kingdom. The applicant's Certificate of Birth may also be required in certain cases.

2. In the case of children under the age of 14 years requiring a separate Passport, upon production of a Declaration made by the child's parent or guardian, in a Form (B), to be obtained upon application to the Foreign Office.
3. In the case of persons naturalized in any of the British Colonies, upon production of a Letter of Recommendation from the Colonial Office; and in the case of natives of British India, and persons naturalized therein, upon production of a Letter of Recommendation from the India Office.

If the applicant for a Passport be a Naturalized British subject, the Certificate of Naturalization must be forwarded to the Foreign Office with the Declaration or Letter of Recommendation. Naturalized British subjects, if resident in London or in the suburbs, must apply *personally* for their Passports at the Foreign Office; if resident in the country, the Passport will be sent, and the Certificate of Naturalization returned, to the person who may have verified the Declaration, for delivery to the applicant.

Naturalized British subjects will be described as such in their Passports, which will be issued subject to the necessary qualifications.

Foreign Office Passports are not available beyond five years from the date of issue. Fresh Passports must then be obtained.

A Passport cannot be issued by the Foreign Office, or by an Agent at an outport, on behalf of a person already abroad; such person should apply for one to the nearest British Mission or Consulate.

LATIN WORDS AND PHRASES.

- Addendum* (plural, *addenda*), a thing added.
Ad infinitum, to infinity.
Ad libitum, at pleasure, without stint.
Ad referendum, for farther consideration.
Ad valorem, according to the value.
A fortiori, with stronger reason.
Alias, otherwise.
Alter ego, another self.
Cum grano salis, with a grain of salt ; with some limitation.
De facto, from the fact.
Desideratum (plural, *desiderata*), a thing to be desired.
Ecce Homo, behold the man.
Exempli gratia, frequently written e.g. (for the sake of example).
Ex officio, by virtue of his office.
Ex parte, on one side only.
Ex tempore, without premeditation ; on the spur of the moment.
Habeas Corpus, you may have the body.
Hic jacet, here he lies.
Id est, frequently written i.e. (that is).
In extenso, in the full extent.
In extremis, in a dying state.
In loco parentis, in the place of a parent.
In puris naturalibus, in a natural state, naked.
- In re*, in the affair of.
In statu quo, in the same position.
In tenebris, in darkness.
Inter alia, among other things.
Interim, in the meanwhile.
Lapsus lingua, a slip of the tongue.
Locum tenens, holding the place.
Modus operandi, the manner of doing a thing.
Multum in parvo, much in little.
Ne plus ultra, literally, nothing more beyond ; perfection.
Nil desperandum, a spair of nothing.
Nolens volens, willing or unwilling.
Obiter dictum, a thing said by the way.
Ora pro nobis, pray for us.
Prima facie, on the first face ; on the first view.
Quid pro quo, something for something.
Rara avis, a rare bird.
Sine die, without (appointing) a day.
Sine qua non, a thing indispensable.
Tempus fugit, time flies.
Vade mecum, go with me.
Verbum sat sapienti, a word to the wise is sufficient.
Vice versa, the terms being exchanged.
Vox populi the voice of the people.

GAS METER, TO READ

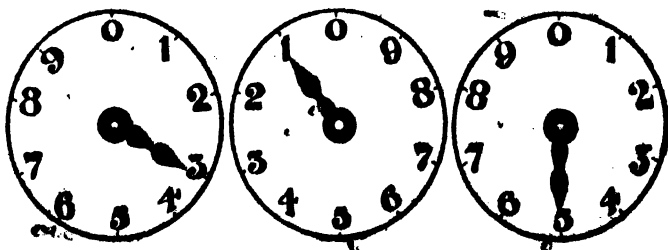
The ordinary domestic meter usually has an index with three clocks. The clock on the right registers the hundreds of cubic feet of gas used, the clock in the middle registers the thousands, and the clock on the left registers the tens of thousands.

Each clock, it will be noticed from the following diagram, has ten figures on it, and when a meter is new all the hands should point to zero, otherwise

the housekeeper should at once notify the gas company how the meter read when it was first used, and keep a record of the figures herself.

In the following diagram it will be noticed that 31,500 cubic feet of gas have been used.

An electric light meter is exactly similar to a gas meter, except that there are sometimes extra clocks for 100th and 1,000th parts of the units.



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